Role Effectiveness of Audit Committees' Governance Characteristics: Impacts on Internal and External Auditing of Listed Companies

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LIST OF ACRONYMS

AC	Audit Committee
AI	Australian Industry Group
AICD	Australian Institute of Company Directors
ASX	Australian Stock Exchange
ASX CGC	Australian Stock Exchange Corporate Governance Council
AUASB	Auditing and Assurance Standards Board
CA	Institute of Chartered Accountants Australia
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIA	Chief Internal Auditor
CLERP	Corporate Law Economic Reform Program
CPA	Certified Practicing Accountant Australia
IIA	Institute of Internal Auditors Australia
KMO	Kaiser-Meyer-Olkin
OSL	Ordinary Least Squares
PCA	Principal Components Approach
S&P	Standard and Poor
SOX	Sarbanes-Oxley Act
VIF	Variance Inflation Factor

ABSTRACT

Audit Committees (ACs) have become more important and prevalent since the initial corporate governance reforms of the mid-2000s. Initially, ACs were made responsible for overseeing and monitoring the company's financial reporting. However, due to the evolving business environment and international auditing standards, ACs are now responsible for other audit and assurance activities that are not directly related to financial reporting. In their expanded roles, ACs have become a key player in their entity's suite of corporate governance mechanisms which are intended to protect the interest of the shareholders and reduce the shareholder-manager agency conflicts in a company. The concept of AC effectiveness can be benchmarked against the widely-recognised contemporary roles of an AC. Effectiveness of ACs in fulfilling their roles is expected to be conditional upon their own structures and members' characteristics.

The aim of this study is to examine the role effectiveness of ACs' governance characteristics in achieving desired levels of quality and independence for the internal and external auditing functions of listed companies in Australia. However, achieving this role effectiveness of ACs will require agency costs. So this study also investigates whether higher audit-related agency monitoring costs (i.e., external audit fees, internal audit function budget and AC fees) result in higher returns to shareholders. The motivations for this study are to contribute to existing AC literature, to develop a comprehensive empirical design, and to provide new evidence from Australia using the ASX CGC revised 2007 edition best practice recommendations on governance.

Five sets of hypotheses are generated from focal literature. Hypothesis one (a) and one (b) test the association between AC's mechanisms for role effectiveness, based on its AC's governance characteristics (i.e., chair independence, financial and industry expertise, size, frequency of meetings and charter) and financial resources (budget and labour hours) devoted to the internal audit function. Hypothesis two (a) and two (b) test the association between AC's mechanisms for role effectiveness and the independence of the internal audit function. Hypothesis three tests the association between AC's mechanism for role effectiveness and the quality of the external audit while hypothesis four tests the association between AC's mechanisms for role effectiveness and the independence of the external auditors. Lastly,

hypothesis five tests the relationship between audit-related agency monitoring costs and total shareholders return. This study uses cross-sectional data and mainly applies multiple regressions to test the hypotheses.

The sampling frame for this study is top 300 companies listed on the Australian Stock Exchange (ASX) for the financial year ending in 2010. A total of 255 companies are drawn from the sampling frame on an elimination basis. Mixed methods are used to gather both primary and secondary data. There are two stages of data collection employed. In the first phase, questionnaires have been developed and administered to the Chief Internal Auditors (CIA) of the sampled companies. Financial accounting and market data and the text in the annual reports are obtained from Connect 4, Aspect-Huntley's FinAnalysis and Morningstar's DatAnalysis databases.

There are several findings from this study. First, in terms of AC's governance characteristics and the role of AC overseeing the quality of the internal audit function, hypothesis one (a) reveals that only AC size is significantly positively associated with financial resources devoted to the internal audit function while hypothesis one (b) shows that both AC expertise and AC size are significantly related to internal audit function's labour hours. Second, in terms of AC's governance characteristics and the AC's role of ensuring the independence of the internal audit function, tests of hypotheses two (a) and (b) find that no attributes of AC's governance characteristics have a significant impact on the effectiveness of ACs in their role of ensuring the internal audit function independence.

Third, in terms of AC's governance characteristics and the role of AC facilitating the quality of the external audit, the tests of hypothesis three find that AC size and AC frequency of meetings are significantly related to external audit fees (a proxy for external audit quality). Fourth, in terms of AC's governance characteristics and the role of AC ensuring the independence of external auditors, the test of hypothesis four reveals that both AC size and frequency of meetings are significantly negatively related to non-audit fees (a proxy for external auditors' independence). Finally, in terms of audit-related agency monitoring costs and total shareholders return, results concerning hypothesis five reveal that total AC fees, but not internal or external auditor costs, are significantly related to total shareholders return.

To provide a more in-depth analysis of the key AC's governance characteristics that are found in the regression analysis to be significant, a comparative case study between two different companies in the financials and materials industry is performed. The results are generally supportive where AC size and frequency of meetings play a significant role in relation to the effectiveness of ACs in performing their roles, especially in the internal audit function (consistent with results of the regression models).

In conclusion, the various findings of this study have important implications for regulators of corporate governance, professional accounting/auditing bodies, shareholders, board of directors and scholarly researchers. This study highlights the significant relationship between an AC's governance characteristics and its effectiveness in fulfilling its roles in overseeing the quality of the internal audit function and also external auditing, as well as ensuring the independence of the internal and external auditors. Finally, this study contributes to current auditing-related governance literature by introducing a comprehensive empirical model along with statistical measure for AC's governance characteristics.

DECLARATION

I, Shir Li Ng, certify that:

1. – except where due acknowledgement has been made, the work completed is mine alone;
2. – the work has not been submitted previously, in whole or in part, to qualify for any other academic award;
3. – the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program;
4. – any editorial work, paid or unpaid, carried out by a third party is acknowledged;
5. – and relevant ethics procedures and guidelines have been followed.

Shir Li Ng
27 March 2013

CHAPTER 1. INTRODUCTION

1.1 Background to the Study and Research Issues

Up until about a decade ago, ACs were commonly viewed as a monitoring mechanism that enhances the audit attestation function of financial reporting by establishing a formal communication link between the board of directors, internal audit function and external auditors (Blue Ribbon Committee, 1999). In the past, financial reporting, accounting systems and internal controls were the main focuses of the ACs' role. Today, ACs are given a broad mandate that covers a wide range of responsibilities such as risk management, financial and non-financial compliance requirements and other audit and assurance activities that are not directly related to the company's financial reporting (AUASB, AICD and IIA, 2008). It is contended that these more extensive responsibilities of ACs can protect the interests of the shareholders and reduce shareholder-manager agency conflicts in the company.

High profile corporate collapses in the previous decade such as Enron and WorldCom in the United States and OneTel, Harris Scarfe and HIH Insurance in Australia have caused corporate regulators and investors to query the effectiveness of ACs in effectively applying a monitoring and compliance role (Dellaportas et al., 2012). Hence, the United States, Australia and many other countries have introduced corporate governance law reforms such as new codes and guidelines to restore investors' confidence in the financial reporting system. The gradual strengthening of corporate governance structures has impacted on the formation and operation of ACs which provides the setting for this study.

Previous studies in Australia (Cooper, 1993; Goodwin, 2003; Goodwin and Kent, 2006; Singh and Newby, 2010) are conducted on data from the years before the implementation of the Australian Stock Exchange Corporate Governance Council (ASX CGC) revised 2007 edition code. Thus, this study seeks to fill a gap in the corporate governance literature which lacks evidence on the effectiveness of governance characteristics of ACs in fulfilling their multiple roles under the current revised code (ASX CGC, 2007) of good corporate governance in Australia.

In this study, the concept of AC effectiveness is benchmarked against the many roles and responsibilities of an AC. The effectiveness of an AC is expected to be influenced by its structure and its members' governance characteristics such as independence, financial and industry expertise, frequency of meetings, size of the committee, and the existence of an AC charter. Past studies addressing AC effectiveness are wide-ranging and have identified several factors that impact on the effectiveness of an AC. (Kalbers and Fogarty, 1993; Goodwin and Yeo, 2001; DeZoort et al., 2002; Carcello et al., 2002; Abbott et al., 2003; Carcello et al., 2005).

According to Kalbers and Forgarty (1993), the structure of an AC and characteristics of its members are considered as a determinant of AC effectiveness. Also, DeZoort and Salterio (2001) argued that the effectiveness of an AC is likely to be affected by its members' collective characteristics of being competent, inquisitive and decisive. However, most of these prior studies only address partial aspects in the design of AC structures and characteristics in terms of AC effectiveness. Hence, this study seeks to provide an up-to-date and comprehensive modelling of the effectiveness of the governance characteristics of Australian ACs in fulfilling their auditing-related roles.

1.2 Overview of AC Regulations in Australia

Previously, regulators in Australia had adopted a simple disclosure-based approach to the establishment of ACs where companies were not required to comply with any rules or best practices. Nevertheless, over the past years, there have been a number of formal recommendations from the regulators, government and professional accounting/auditing bodies seeking to mandate the establishment of ACs in listed companies in Australia. According to Munro and Buckby (2008), the development of AC regulations in Australia can be categorized into three distinct periods: Period 1 (from 1976 to 1 July 1993) – voluntary AC formation and non-disclosure, Period 2 (from 1 July 1993 to 1 January 2003) – voluntary AC formation and public disclosure and Period 3 (from 1 January 2003 to present) – mandatory AC formation and public disclosure.

Period 1 (from 1976 to 1 July 1993) is the period where listed companies in Australia are not required to establish an AC and are not required to disclose publicly in their annual reports whether they had an AC. Period 2 (from 1 July 1993 to 1 January 2003) represents the period

where listed companies in Australia are still not required to establish an AC but they are required by the ASX to publicly disclose in their annual reports whether they had an AC. Period 3 (from 1 January 2003 to present) is the period where top 300 listed companies in Australia are required by the ASX to have an AC and must disclose further information about the composition and operation of their AC (Munro and Buckby, 2008; ASX, 2001; ASX, 2006).

With the increase of financial reporting frauds and high profile corporate scandals, the Sarbanes-Oxley Act (SOX) was enacted in the United States (January 2002) to establish new corporate governance standards for the board of directors and the ACs. The SOX legislation was enacted mainly due to the collapse of Enron and implemented rules and regulations that required all listed companies in the United States to establish an AC. Following the issue of SOX in the United States and the collapse of big corporations in Australia, the Corporate Law Economic Reform Program (Audit Reform & Corporate Disclosure) Act 2004, also known as CLERP 9, was introduced by the Australian government. This Act was largely implemented by modifications to the Corporations Act 2001. CLERP 9 was designed to strengthen the regulatory framework in the key areas of corporate accountability and governance, continuous disclosure, and the protection of the interests of the shareholders.

At present, the ASX CGC's best practice recommendations and ASX's listing rules govern the foundation, policy and procedures of ACs in Australia. In March 2003, ASX CGC issued the *Principles of Good Corporate Governance and Best Practices Recommendations Guidelines: ASX CGC 2003*. ASX CGC (2003) was implemented to improve the efficiency, quality and integrity of corporate governance practices and presentation of a listed company's financial position (Murno et al., 2008). Due to the evolving nature of corporate governance, in 2 August 2007, ASX CGC undertook an extensive review and issued a revised edition of the *Principles of Good Corporate Governance and Best Practices Recommendations Guidelines: ASX CGC 2007*.

This document was very similar to the 2003 release. The key changes between the ASX CGC 2003 edition and the ASX CGC 2007 edition are the removal of best practice from the title and further guidance on the list of relationship affecting board members independence status which will assist boards to determine the independence of a director for AC purposes (ASX

CGC, 2007). The ASX CGC 2003 and ASX CGC 2007 are the key points of reference for the ACs on their roles and responsibilities. The recommendations of the ASX CGC for ACs focuses on ACs' characteristics such as independence, financial and industry expertise, size, frequency of meetings and the existence of a formal charter.

On the other hand, the operation and composition of ACs in Australia are governed by the ASX listing rules. The ASX listing rules have statutory backing under the Corporations Act 2001. In 2003, ASX Listing Rule 12.7 was issued, where from 1 January 2003 onwards, top 500 companies listed on the ASX at the beginning of the financial year are required to establish an AC and must comply with ASX CGC's AC recommendations. However, in 2004, the ASX Listing Rule 12.7 was amended such that only top 300 listed companies are required to establish an AC. The rules also require the top 300 listed companies to comply with recommendations of the ASX CGC's principles and recommendations on the composition, operation and responsibility of an AC (AUASB, AICD and IIA, 2008). The next 200 listed companies are also require to establish an AC but not necessarily to follow ASX CGC's AC recommendations whereas, the remaining smaller listed companies are only require to indicate in their annual reports whether an AC had been created.

In summary, Australia has moved forward from a simple disclosure-based approach to an established comprehensive framework of corporate governance through amendments to the Corporations Act (2001), the implementation of CLERP 9 and the active involvement by the ASX, which has issued corporate governance listing rules and best practice recommendations (ASX CGC, 2003, ASX CGC, 2007; Munro and Buckby, 2008). Hence, this study aims to test whether AC regulations and guidelines on corporate governance structures and practices have been effective in improving the role fulfilment of ACs within the top 300 ASX listed companies.

1.3 Roles and Responsibilities of ACs in Australia

An AC is a subcommittee of the board of directors responsible for overseeing the company's financial reporting and disclosure, overseeing risk management and internal controls and acting as a communication link between the board, management, external auditors and internal auditors. An effective AC represents a good corporate governance mechanism that reduces potential agency conflicts arising due to the separation of corporate control and

ownership between the management and the shareholders (Jensen and Meckling, 1976; Abbott and Parker, 2000; Lary and Taylor, 2011). The scope of roles and responsibilities of an AC will rely, to some extent, upon the individual needs and characteristics of a company. It can be seen that, some Australian companies have established one committee (Audit and Risk Committee) with broad responsibility such as risk management and assurance matters while other companies choose to establish a traditional AC (Audit Committee) and a separate risk management committee (Risk and Compliance Committee).

The ASX CGC (2007) provides recommendations and guidelines to improve the efficiency and quality of ACs in Australia. ASX CGC puts forward a limited focus on the AC and the companies can choose to increase and expand the role of the AC to take on a wider multitude of other responsibilities. Moreover, the roles and responsibilities, powers and rights, membership requirements, structure and procedures for conducting AC meetings are also clearly described in the AC charter. It can be argued that an AC must exhibit at least five characteristics (has independent members, has financial and industry expert members, has sufficient members, has frequent meetings and has a formal charter) to enable it to effectively discharge its roles.

An AC is considered to have oversight roles in three core areas: 1) financial statement reporting; 2) internal audit functioning and 3) external audit services. The main function of an AC in the financial reporting area is to help the board of directors of the company to carry out its supervision responsibilities such as reviewing the financial information and overseeing the company's accounting and financial reporting processes. An AC is also responsible for ensuring the credibility and reliability of the financial reports (e.g., reduce earnings management) by reviewing the appropriateness of accounting policies and disclosures to the presentation of a true and fair view.

Additionally, in the external audit area, an AC is responsible for facilitating the quality of the external audit and ensuring the independence of the external auditors. In this respect, an AC is required to make recommendations to the board on the appointment, removal and remuneration of the external auditors. Also, the AC is expected to invite the external auditors to attend AC meetings to discuss matters about the external audit plan including proposed audit strategies and programs.

For internal audit function, the main role for an AC is to oversee the internal audit function and ensure the independence of the internal auditors. An AC is responsible to make recommendations to the board of the company on the appointment, remuneration and dismissal of Chief Internal Auditor (CIA). An AC is also responsible for reviewing the internal audit function's plan, internal controls, risk management, resources and budget such that the internal audit function is effective and independent from the management. In summary, this study benchmarks AC effectiveness against aspects of two of the AC's core roles: 1) overseeing the quality and ensuring the independence of the internal audit function and 2) facilitating the quality and ensuring the independence of the external auditors.

1.4 Composition of ACs in Australia

The composition of ACs in Australia is expected to consist of members with a high quality of independence and objectivity, demonstrated financial literacy, and a balance of professional skills and technical experiences and also the AC should be of sufficient size to carry out its responsibilities effectively (ASX CGC, 2007). According to the ASX Listing Rule 12.7, top 300 listed companies are required to establish an AC. The rule also requires the top 300 listed companies to comply with recommendations of the ASX CGC's principles and recommendations on the composition, operation and responsibility of an AC (AUASB, AICD and IIA, 2008). ASX CGC's Recommendation 4.1 suggests that the board of a company should establish an AC. Moreover, ASX CGC's Recommendations 4.2 and 4.3 recommend that the AC should be structured so that it consists of independent non-executive directors, is chaired by an independent chair, has at least three members and has a charter.

The ability to make objective and independent decisions by the AC is important. The AC should consist of independent directors who are free from day to day management and other relationships that can interfere with the AC's decisions to act in the best interest of the shareholders. The Chief Executive Officer (CEO) or the Chief Financial Officer (CFO) should not be a member of the AC. Sometimes, the board might choose to appoint a member in the AC that has an indirect relationship with the company because of the member's expertise. Thus, ASX CGC recommends that the board should disclose the existence of any such relationship and state the reason for choosing a member of the AC. Also, the chair of the AC plays an important role in ensuring the effectiveness of the AC's operation in a company.

According to ASX CGC, the chair of the AC should not be the chair of the board, but should have financial expertise and be knowledgeable about the company's business, financial reporting and auditing requirements. To perform their roles and responsibilities effectively, it is important to have AC members who are financially literate and, preferably, have an accounting/financial qualification. According to ASX CGC, an AC should have members who are able to understand financial statements, should have at least one member who has relevant qualifications and experience and should have some members with an understanding of the industry in which the company operates (at least 10 years relevant industry experience).

An AC's objectives are expected to be achieved through regular conduct of meetings. ASX CGC does not provide recommendations on the number of meetings that an AC should have each year as the required number of meetings may differ. The number of AC meetings held each year should depend on the size and complexity of the business. It is common for the CEO and CFO of the company to attend AC meetings to discuss and resolve issues in a timely manner. AC members also have the right to meet without the presence of the management in order to maintain its independence and objectivity.

AC size is also seen to be important to the overall strength of the AC. According to ASX CGC, an AC should be structured so that it has at least three members to carry out the wide responsibilities and the complex nature of accounting and financial matters. However, ASX CGC does not place an upper limit on the number of members in a committee and there is an issue whether or not larger AC size would lead to more effective monitoring. A final characteristic is an AC charter. This is viewed as important because it makes explicit the scope of an AC's responsibilities, rights (which give it authority) and the procedures for conducting meetings. ASX CGC requires an AC to have a formal charter. To sum it up, in this study, the concept of AC effectiveness is benchmarked against AC members' governance characteristics.

1.5 Objectives of the Study

This study aims to investigate the effectiveness of ACs in performing their roles and, supplementary to this aim, to also examine the relationship between the audit-related agency monitoring costs and total shareholders return as an intended central part of good corporate

governance in the post-reform era in Australia. The four specific objectives are detailed as follows:

1. To identify the prevalence of 'good governance' characteristics of ACs in Australian listed companies, in terms of AC chair independence, members' financial and industry expertise, size of committee, meeting frequency and formal charter.
2. To explain the extent to which ACs' governance characteristics impact on ACs' roles of overseeing the quality of the internal audit function and ensuring the independence of the internal audit function.
3. To explain the extent to which ACs' governance characteristics impact on ACs' roles of facilitating the quality of external audit and ensuring the independence of external auditors.
4. To determine whether higher audit-related agency monitoring costs (i.e., external audit fees, internal audit function budget and AC fees) result in higher returns to shareholders (i.e., higher total shareholders return).

From the findings of this study, conclusions will be reached on which AC's governance characteristics are more effective in fulfilling the AC's roles especially in the internal audit function and the external audit engagement.

1.6 Motivation and Significance of the Study

This study is motivated to contribute to existing literature on AC effectiveness and its 'good governance' determinants. Previous corporate governance studies have been limited in modelling the effectiveness of ACs. Even though the effectiveness of ACs are investigated in the United States, the United Kingdom and Australia, no empirical evidence are provided from the viewpoint of testing the effectiveness of AC's governance characteristics in fulfilling their dual roles of overseeing the internal audit function and also the external audit engagement. Most studies focused solely on either internal or external audit. Thus, the incremental contribution of this study is to provide findings on the effectiveness of Australian ACs in performing these dual audit-related roles in the context of top 300 companies listed on the ASX. By providing a comprehensive and integrated understanding of the operations and responsibilities of ACs, this study has practical interest for regulators, corporate boards and auditors.

The Australian context lends itself to research as recent regulatory changes (ASX CGC, 2007) relating to ACs, enables the findings of this study to provide a review for regulators on whether regulatory changes have improved the ACs' roles of large listed companies. Previous studies in Australia focused on the effectiveness of ACs in terms of audit fees or earnings management in the years before the implementation of the ASX CGC 2007 revised edition code. Moreover, this study is significant because it refines and extends the methodology of prior accounting research. The methodology of prior research, which has provided the foundation of this study is refined and extended in a number of important directions, as will be detailed in Chapter 4.

As well, a distinctive aspect of this study which has not been addressed in previous papers concerns the issue of agency costs and benefits. Separation of ownership and control between the shareholders and management provides incentives for managers to act in their own best interest. Hence, the strengthening of the corporation's auditing and internal control functions (i.e., the functions of the AC, external auditors and internal auditors) can reduce this problem. It can be argued that higher audit-related agency monitoring costs (AC fees, external audit fees and internal audit budget) should bring about greater protection of the interest of the shareholders.

Higher audit-related agency monitoring costs should produce a stronger monitoring mechanism and improve corporate governance quality of the company in terms of reducing agent conflict between the shareholders and the managers. But does such shareholder protection expected from incurring higher audit-related agency costs lead to increased financial returns to shareholders? To this extent, there is no study testing this question. Hence, this study is the first to examine whether aggregate audit-related agency monitoring costs is positively related to total shareholders return.

1.7 Organisation of the Study

This study has seven chapters. Chapter 1 presents an overview, motivation, significance and expected contribution of the study. The remaining chapters are organized as follows:

Chapter 2 reviews related prior studies and provides a summary of literature used. Chapter 3 explains the theoretical foundation of agency theory and states the hypotheses forming the

basis of this study. Chapter 4 describes the questionnaire data research methodology and secondary data research methodology used to test the underlying assumptions of the hypotheses of this study. This includes data source, data collection, basis of measurements and definitions, model development and conceptual model. Chapter 5 reports the analysis, results and discussion corresponding to the related hypotheses and models.

Chapter 6 undertakes two comparative case study analyses. Due to the issue of confidentiality, the four companies will not be named. The companies will be called Company A, Company B, Company C and Company D instead. Company A and Company B are in the financials industry while Company C and Company D are in the materials industry. The companies are selected based on the findings from the preceding chapter (Chapter 5). Lastly, Chapter 7 summarises the whole thesis and discusses the implications based on major findings. In addition, limitations and directions for future research are considered.

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

This chapter reviews prior literature relevant to the components of this study. Firstly, the term "AC effectiveness" is discussed. Next, the chapter surveys literature that addresses five factors that impact on the effectiveness of an AC. To facilitate comparison and analysis of the past studies reviewed, the studies are categorised into five major groups: 1) AC overseeing the quality of the internal audit function, 2) AC ensuring the independence of the internal audit function, 3) AC facilitating the quality of audit of the external audit, 4) AC ensuring the independence of the external auditors and 5) governance-related agency costs and their value to shareholders. For each of these five major groups a detailed discussion is provided in the form of an introduction, an outline of the extant studies, a comparative assessment and annotated tabulation tables of these studies.

2.2 AC Effectiveness

The Oxford Online Dictionary defines effectiveness as follows: "the degree to which something is successful in producing a desired result". The desired results or effects of an AC in a company consist of providing good corporate governance by ensuring quality financial reporting and strengthening investors' confidence in the financial reporting. The effectiveness of Australian ACs can be benchmarked against their many roles and responsibilities as required by the ASX CGC particularly in the internal audit function and external audit. The subjectivity of the notion of AC effectiveness and the availability of public data that can be obtained make the construct of AC effectiveness complex to model for empirical testing.

Drawing upon the recommendations in the ASX CGC (2007), it can be argued that for an AC to be effective, it must exhibit at least five characteristics. First, the AC is chaired by an independent chair, which is not the chair of the board. Second, the AC should include members who are all financially literate; at least one member should have relevant qualifications and experience (that is, should be a qualified accountant or other finance professional with experience in financial and accounting matters); also some members should have an understanding of the industry in which the company operates. Third, a minimum size of three AC members is required for the AC to function effectively. Fourth, ASX CGC does not provide recommendations on the number of meetings that an AC should have each year

but given the various roles and responsibilities allocated to the AC, it needs to hold sufficient meetings (at least three times a year) to undertake its obligation effectively. Lastly, the AC should have a formal charter.

Previous literature adopted different proxies to determine the effectiveness of ACs in their monitoring roles. DeZoort et al. (2002) characterised the effectiveness of AC as having qualified members with the authority and resources to protect stakeholders' interests by ensuring reliable financial reporting, internal controls, and risk management through its diligent oversight efforts. Similarly, Kalbers and Fogarty (1993) defined AC effectiveness as the competency of the AC to undertake specified oversight responsibilities in the company.

On the other hand, Carcello et al. (2005) conceived AC effectiveness as an ability to oversee the internal audit function activities which are measured by total internal audit budget devoted to the internal audit function. Alternatively, Goodwin and Yeo (2001) assessed the effectiveness of an AC as an ability to maintain internal audit function independence whether in appearance or fact. From yet another perspective, Carcello et al. (2002) defined the effectiveness of an AC as an ability to protect the interests of the shareholders by purchasing higher quality audit services, where the quality of audit service is represented in higher audit fees. Likewise, Abbott et al. (2003) assessed the AC effectiveness as an ability to maintain the independence of external auditor which is measured by the ratio of non-audit fees to audit service fees.

Literature addressing AC effectiveness is wide-ranging and has identified several factors that impact on the effectiveness of an AC. Drawing on this literature, the five factors used in this study are independence of AC chair, financial and industry expertise of AC members, frequency of meetings of AC, size of AC and formal charter of AC (subject of ASX CGC's 2007 recommendations). These five factors would act as a suitable construct in testing the effect of the role of AC effectiveness on the internal and external audit in this study.

2.3 Characteristics that Reflect AC Effectiveness

Based on past literature, this study has identified five factors that can reflect the role effectiveness of an AC:

1. Independence of AC chair
2. Financial and industry expertise of AC members
3. Frequency of meetings of AC
4. Size of AC
5. Formal charter of AC

2.3.1 Independence of AC Chair

The independence of AC members and chair are deemed to be important characteristics enabling AC effectiveness. Fama and Jensen (1983) argued that independent AC members as outside directors may view the directorate as a means of enhancing their reputations as being an expert in decision control. According to ASX CGC (2007) Recommendations 4.2, the AC should be structured so that it comprises only of non-executive directors, consists of a majority of independent directors and is chaired by an independent chair that is not the chair of the board. These recommendations are supported by the findings of previous studies which established that AC independence impacts on the committee's effectiveness (Abbott et al., 2000; Beasley et al., 2000; Carcello and Neal, 2000; Goodwin and Yeo, 2001; Klein, 2002; Abbott et al., 2004).

Past literature also proposes that AC independence can strengthen the quality of financial reporting. Beasley et al. (2000) argued that fraudulent reporting firms are less likely to occur when firms have an AC that is active and independent. Also, Abbott and Parker (2000) found that ACs that consist of independent directors and meet at least twice per year are less likely to be sanctioned for fraudulent or misleading reporting. In a later study by Abbott et al. (2004), the authors found that AC independence is significantly and negatively related to the occurrence of earnings management.

Similar findings also emerged from Klein (2002) and Carcello and Neal (2000) where ACs comprised of independent members are more effective in monitoring the corporate financial accounting process. In summary, previous studies found that ACs independent from management are likely to demand a greater level of audit assurance and ensure reliable

financial reporting. Conversely, other studies found no evidence between the independence of AC members and discretionary accruals (Xie et al., 2003), or the occurrence of earnings restatements (Lin et al., 2006), or quarterly earnings management (Yang and Krishnan, 2005).

2.3.2 Financial and Industry Expertise of AC Members

In addition to independence, AC expertise is considered important governance characteristic for the effectiveness of ACs in fulfilling their oversight role and protecting the interests of shareholders. It is essential for all the members in the AC to have a financial or/and accounting background in order to assist the committee to understand and report on the financial information of the organisation and also some members need to have industry experience relevant to the organisation (Munro and Buckby, 2008).

It has been proposed in ASX CGC (2007) Recommendations 4.3 that AC should include members who are all financially competent, at least one member should have relevant qualifications and experience and some members should have an understanding of the industry in which the entity operates. ASX CGC defines financial expertise as the ability to read and understand financial statements. The financial qualifications and experience of the AC members can be demonstrated by previous or current employment in finance or accounting firms and the membership of a professional financial/accounting body.

Findings from earlier studies have shown that financial expertise is essential for AC members to perform their role well (Raghunandan et al., 2001; DeZoort and Salterio, 2001; Abbott et al., 2003; Goodwin, 2003; Xie et al., 2003; Abbott et al., 2004; Davidson et al., 2004). Raghunandan et al. (2001) and Goodwin (2003) posited that an AC with financial expertise has greater interaction and communication with the internal auditors. This implies that AC members with financial reporting knowledge are more likely to understand the extent of the internal controls and work performed by the internal audit function. Moreover, DeZoort and Salterio (2001) argued that AC members with more experience and financial knowledge are more likely to comprehend the risk the external auditors face and provide additional support for the external auditors when discussing issues and disagreements with the management.

Also, organisations with an AC that has financial expertise and industry experience are more likely to produce higher quality financial reports. Davidson et al. (2004) argued that the

market reacts positively to the appointment of an AC with financial expertise. This is because AC members with corporate or financial background would be able to better understand earnings management and take action to prevent managers engaging in earnings management. Abbott et al. (2003) and Abbott et al. (2004) also found that there is a negative relationship between financial fraud and AC financial expertise.

2.3.3 Frequency of Meetings of AC

ASX CGC does not provide recommendations on the number of meetings that an AC should have each year. The number of AC meetings held each year may differ and should depend on the size and the risk of the business.

Empirical evidence supports the importance of AC meeting (Beasley et al., 2000; Xie et al., 2003; Abbott et al., 2004). Beasley et al. (2000) found that the frequent AC meetings are associated with less fraud. Moreover, Xie et al. (2003) found that AC meetings are associated with reduced levels of discretionary current accruals and the authors concluded that AC activity may be an important factor in constraining the propensity of managers to engage in earnings management. Consistent with both studies, Abbott et al. (2004) found that ACs that meet at least four times annually are less likely to restate their annual reports. These results indicated that ACs that meet frequently are more likely to be up to date about the current auditing issues faced by the company and are more attentive in discharging their responsibilities.

However, other papers are unsuccessful in finding a significant association between the AC meetings and fraud (Abbott et al., 2004) or earnings management (Yang and Krishnan, 2005). Also, Davidson et al. (2005) found no evidence of a significant relation between the number of AC meetings and earnings management.

2.3.4 Size of AC

AC size is also seen to be crucial to the overall strength of the AC. ASX CGC (2007) Recommendation 4.2 asserts that the AC should be structured so that it has at least three members to carry out their wide responsibilities and the complex nature of accounting and financial matters. However, ASX CGC does not place an upper limit on the number of

member in the committee and there is an issue whether larger AC size would lead to more effective monitoring.

Felo et al. (2003) posited that a larger AC increases financial reporting quality as such an AC is more likely to discover and solve potential risks in the financial reporting process. This may be possible if the resources available to the AC are increased to improve the oversight of financial reporting. Furthermore, Lin et al. (2003) found that companies with ACs comprising of at least four members are less likely to experience earnings restatements. Dalton et al. (1999) also found a positive association between AC size and the monitoring function of the board. Further, Psaros (2009) argued that an AC needs to have sufficient members such that different and informed views can be canvassed, and it is not dominated by one individual. However, Xie et al. (2003) found a weak association between AC size and earnings management and Abbott et al. (2004) also found no evidence of a relationship between AC size and earnings restatement.

Based on the results from previous studies it can be argued that a larger AC is necessary for effective monitoring. Although ASX CGC (2007) recommends that AC should have at least three members, companies may choose to have more than three members. Thus, this study uses the same argument that a larger size AC would have more diverse skills and knowledge to enhance monitoring.

2.3.5 Formal Charter of AC

An AC charter is important in an organisation as it clearly sets out the AC's roles and responsibilities, powers and rights, membership requirements, structure and the procedures for conducting AC meetings. The charter is probably the most important basis for achieving an effective AC. According to ASX CGC (2007) Recommendation 4.3, an AC should have a formal charter. The ASX CGC's recommendation for an AC charter sets forward the minimum expectations. As such, an AC responsibility will be very much a function of the company and the industry in which it operates (Psaros, 2009).

To this date, not many studies have examined the AC charter. Rezaee et al. (2003) investigated the subject matter of the AC charters of Fortune 100 companies and found that over nine percent of charters state the composition, independence, qualifications and financial

expertise of their AC members. Moreover, Kalbers and Fogarty (1993) argued that the existence of a clear AC charter provides power for authoritative decision making and thus, the AC can achieve its oversight role more effectively.

2.4 AC Overseeing the Quality of the Internal Audit Function

2.4.1 Introduction

One of the responsibilities of AC in Australia is oversight of the internal audit function's policies and procedures. The relationship between internal audit function and the AC is, however, much greater than that of overseen and overseer (Goodwin and Yeo, 2001). To maintain good corporate governance, communication between the employees responsible for the internal audit function and the AC is vital (Scarbrough et al., 1998; IIA 2002a, 2002b, 2003b).

According to Gwilliam and Kilcommins (1998), the presence of an AC creates a perception of enhanced independence of internal audit function and more reliable financial reporting among financial statement users. This point of view is also supported by Krishnan (2005) where the AC's position is enhanced because it can depend on the work of the internal audit function. Internal audit function in a company can also help to reduce problems related to agency theory and information asymmetry because an AC does not have direct access to the same level of information as the management (Raghunandan et al., 2001). Rezaee and Lander (1993) argued that the working relationship between the internal audit function and AC must be year round and an open relationship in order to be most effective. Moreover, Zaman and Sarens (2013) found that AC and internal audit function engaging in informal interactions in addition to formal prescheduled regular meetings represent additional opportunities for AC to monitor the internal audit function.

The sub-sections below present and discuss literature that examined the relationship between the AC and the internal audit function and a summary table of annotated literature review is also presented.

2.4.2 Extant Studies

Scarborough et al. (1998) investigated the association between AC composition and their interaction with the internal audit function. The authors surveyed CIAs of Canadian manufacturing companies with sales greater than $50 million. The results indicated that there are no significant differences with respect to involvement in decisions to dismiss the CIA. Also, ACs consisting solely of non-employee directors are more likely to have frequent meetings with the CIA and review the internal auditing program.

Furthermore, Raghunandan et al. (1998) presented empirical evidence about the perceived level of knowledge of ACs based on a survey of 72 CIAs. The main findings showed that ACs that granted private access to their CIA and reviewed both the plans and results of internal auditing are more likely to be perceived as knowledgeable by their CIA. In more recent years, Raghunandan et al. (2001) performed a similar study to Scarbrough et al. (1998) by using responses from CIAs of 114 United States manufacturing companies. Consistent with Scarbrough et al. (1998), they found that ACs consisting solely of independent directors and with at least one member having an accounting or finance background are more likely to have longer meetings with CIA, provide private access to CIA and review internal audit proposals and results of internal auditing.

On a similar theme, Goodwin (2003) examined the separate influence of independence and financial expertise on AC relations with the internal audit function. Using data from Australia and New Zealand, the study focused on ACs and internal audit functions in both private and public sector. They found that independence and accounting experience have a complementary impact on AC relations with the internal audit function. The author argued that independence is more associated with the issue of process while accounting experience is associated with the extent that the AC reviews the work of the internal audit function.

Carcello et al. (2005) examined factors associated with United States public investment companies in internal auditing. Data from surveys sent to CIA of mid-sized public companies are combined with publicly available data. The authors found that internal audit budget is positively related to AC review of the budget. In the United States, Abbott et al. (2010) investigated the association between the AC's oversight of the internal audit function and the nature of internal audit function activities by surveying 134 CIAs from Fortune 1000. They

documented a strong, positive association between the AC oversight variable and the amount of internal audit function budget allocated to internal-controls-based activities.

Taking a qualitative approach, Cooper's (1993) study discussed the formation and membership of an AC and the relationship of the AC and internal audit in Australia. The author argued that an effective and harmonious relationship between the AC and internal audit can have a profound beneficial effect on corporate management and control. A final study in this review is Abbott et al.'s (2003) examination of the association between AC effectiveness and internal audit outsourcing. Data are obtained from a survey of 219 CIAs and from relevant proxy statements filed in 2001. The findings indicated that companies with effective ACs are less likely to outsource internal auditing to the external auditor. Effective ACs that also have authority over the CIAs' dismissals will have an incrementally negative relation with the extent of outsourcing.

2.4.3 Comparative Assessment

Overall, previous studies have concluded that an effective AC can heighten the status of the internal audit function and at the same time, the internal audit function helps the AC in its oversight role (Cooper, 1993; Scarbrough et al., 1998; Raghunandan et al., 1998; Raghunandan et al., 2001; Goodwin, 2003; Abbott et al., 2003; Carcello et al., 2005; Abbott et al., 2010).

In addressing the relationship of the AC to the internal audit function, studies such as Scarbrough et al. (1998) and Raghunandan et al. (2001) examined the association between AC composition and the committee's interaction with internal auditing. Both studies used the same method by sending surveys to CIAs in publicly held manufacturing companies. Scarbrough et al.'s (1998) study is performed in Canada using a larger sample size while Raghunandan et al.'s (2001), a more recent United States study used a smaller sample size consisted of 114 public companies. Both consistently found that ACs consisting of solely non-employee directors are more likely to have frequent meetings with the CIA and review the internal auditing program.

Moreover, Goodwin (2003) performed a similar study to Scarbrough et al. (1998) and Raghunandan et al. (2001) in Australia and New Zealand where the author separated the

influence of independence and financial expertise on AC relations with the internal audit function. They found that independence and accounting experience have a complementary impact on AC relations with internal audit. On the other hand, in terms of analysing the perception and the perceived level of knowledge of ACs, Raghunandan et al. (1998) found that ACs that granted private access to their CIAs and reviewed both the plans and results of internal auditing are more likely to be perceived as knowledgeable. It could be argued that ACs performing their role as an internal control oversight can have a strong beneficial effect on corporate management. These results provided empirical support for the recommendations of a private sector commission which has called for increased interaction between ACs and internal auditing.

In a different context, Abbott et al. (2010) used the AC's oversight of the internal audit function as a direct measure in their study. Like all other studies, the authors survey 134 CIAs from Fortune 1000. They found that ACs with greater internal audit function oversight are associated with a larger percentage of internal audit function hours being allocated towards internal control activities. It infers that ACs demanding for better internal controls may cause higher internal audit function focus on internal controls.

2.4.4 Tabulated Annotations

The annotated literature review on AC overseeing the quality of the internal audit function is presented in Table 1.

Table 1: Annotated Literature Review on AC Overseeing the Quality of the Internal Audit Function

Author(s) Year(s)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Scarbrough, P., Rama, D.V., & Raghunandan, K. (1998)	Examine the association between AC composition and the committee's interaction with internal auditing, as measured by (1) involvement of the AC in decisions to dismiss the CIA (2) meetings between the AC and the CIA, and (3) AC review of the internal auditing program and results of the internal auditing.	398 companies are mailed the questionnaire. Receive 58 responses from large companies (>$50million sales) and 50 responses from small companies.	Survey CIAs of Canadian manufacturing companies with sales greater than $50million.	No significant differences with respect to involvement in decisions to dismiss the CIA. ACs consisting of solely non-employee directors are more likely than AC consisting of one or more insiders to have (1) frequent meetings with the CIA and (2) review the internal auditing program and the results of internal auditing.	Internal auditors' interactions may be influenced by other factors. Study focus is narrow; only examine those issues which have been discussed in the reports of various private sector commissions. Do not examine issues in greater depth. Future research: (1) Examine AC interactions with internal auditors in other countries and compare the results. (2) Examine issues related to AC interactions with internal auditors in greater depth by focusing on the quality of the interaction.

Table 1 (Continued): Annotated Literature Review on AC Overseeing the Quality of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Raghunandan, K., Rama, D.V., & Scarbrough, D. (1998)	Extend current literature related to AC by providing evidence about the perceived level of knowledge of Canadian ACs with respect to accounting and auditing issues and the impact of the nature of interaction between the AC and internal auditing on such perceived level of knowledge.	Indentify names and address all publicly held Canadian manufacturing companies with sale greater than $50million. Mail questionnaire to the CIA of 398 companies.	Perform additional analysis by including company size and the proportion of internal auditing time spent on financial auditing.	Find an association between AC interaction with internal auditing and the perceived knowledge level of AC. ACs that grant private access to the CIA and reviewed both the plans and results of internal auditing are more likely to be perceived as knowledgeable by CIAs.	Possibility of non-response bias. Survey asks respondents' perceptions about the knowledge level of AC. Perceptions may differ from reality and may be subject to bias based on individual experiences.

Table 1 (Continued): Annotated Literature Review on AC Overseeing the Quality of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Raghunandan, K., Read, W.J., & Rama, D.V. (2001)	Examine the association between AC composition and the committee's interaction with internal auditing.	Obtain the names and addresses of all publicly held United States manufacturing companies with sales greater than $250 million from CD-SEC database. Mail to 400 randomly selected companies of CIA. Receive 129 responses. Final sample consists of 114 usable responses.	Examine 5 research questions with five multivariate regression analyses.	ACs comprise solely of independent directors and with at least one member having an accounting or finance background are more likely to: (1) have longer meetings with the CIA (2) provide private access to the CIA and (3) review internal audit proposals and results of internal auditing.	Future research: (1) Should examine the nature of the relationship between ACs and internal auditing by delving into issues such as personality, attitude and character brought into the relationship by the AC members. (2) Examine how the composition of ACs without inside or gray directors varies across countries. (3) Compare AC interaction with internal auditing in various countries.

Table 1 (Continued): Annotated Literature Review on AC Overseeing the Quality of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Goodwin-Stewart, J. (2003)	Examine the separate influence of independence and financial experience on AC relations with the internal audit function.	Use data from Australia and New Zealand, the study focuses on ACs and internal audit in both private and public sector. Data are collected by means of a questionnaire sent to CIAs. IIA processes the mailing of questionnaires with responses being mailed directly to the researcher. Final sample consists of 120 responses.	Identify differences in responses based on the composition of AC, country and sector in which the entity operates.	Find that independence and accounting experience have a complementary impact on AC relations with internal audit. Independence is more associated with the issue of process while accounting experience is associated with the extent that the AC reviews the work of the internal audit function.	Small sample size may have influenced the results. Generalisability of the results to other jurisdictions may be limited. Future research: (1) Studies could explore the nature and level of accounting expertise that best equip AC members. (2) The nature of AC meetings with the CIA could be investigated to identify the extent of AC reliance on the work of internal audit.

Table 1 (Continued): Annotated Literature Review on AC Overseeing the Quality of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Carcello, J.V., Hermanson, D.R., & Raghunandan, K. (2005)	Investigate three factors associated with United States public companies' investment in internal auditing. Expect the internal audit budget to be higher when the AC reviews the internal audit budget. Examine whether the total investment in internal audit is associated with the percentage of company's internal auditing that is outsourced. Address the relation between external audit fees and internal audit budgets.	Data from a survey administer to CIA of mid-sized United States public companies are supplemented with publicly available data. Final sample consists of 217 companies.	Use OLS regression models in the analysis.	Internal audit budgets are positively related to company size, leverage, financial service and utility industries, relative amount of inventory, operating cash flows and AC review of the internal audit budget. Total internal audit budget are negatively related to the percentage of the internal audit services.	Data are derived from a survey of CIAs and the study relied on the accuracy of these responses. Study focuses on mid-sized public companies and the results might not be generalised to other public companies or to private organisations. Unmeasured factors, such as management characteristics may be correlated with both internal audit investment and certain independent variables.

Table 1 (Continued): Annotated Literature Review on AC Overseeing the Quality of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Abbott, L.J., Parker, S., & Peters, G.F. (2010)	Examine the association between the activities performed by the internal audit function and the extent of AC oversight of the internal audit function. Examine the association between AC oversight and the amount of internal audit function resources allocated to internal-controls-based activities. Examine the allocation of the internal audit function budget and utilize a better measure of the degree of AC involvement with the budget process.	Questionnaire is mailed to Fortune 1000 companies after excluding banks. The 1st survey is sent in July 2006 and results in a total of 72 usable responses. A follow-up mailing is conducted in September 2006 and produces an additional 62 usable responses. Final sample consists of 134 observations.	Survey 134 CIAs from fortune 1000 firms regarding the amount of internal audit resources allocated across internal audit activities in fiscal year 2005. Construct a composite measure of AC oversight contingent on the relative control that the AC has over internal audit function via vis-à-vis management.	AC with greater internal audit function oversight is associated with larger percentages of internal audit function hours being allocated toward internal controls activities. Document significant differences in the allocation of internal audit budget across different activities. Majority of the budget is devoted to internal controls activities. AC's demand for better internal controls may lead to greater internal audit function focus on internal controls.	Survey instrument captures the CIA's perception of AC oversight may not indicate the complex relationship amount the various stakeholders. Do not allow study to make causal inferences, only to document associations. Response bias may reduce the generalisable of results and endogeneity issues may be at play. Future research: (1) Can utilise the study's results to benchmark both internal audit resource allocations and the degree of AC oversight of the internal audit function. (2) Fully explore the internal audit function and AC.

Table 1 (Continued): Annotated Literature Review on AC Overseeing the Quality of the Internal Audit Function

Author(s) (Year)	Discussions
Cooper, B.J. (1993)	Discuss the formation and membership of an AC in Australia. A successful AC usually comprises of three to five non-executive directors who are able and willing to accept the responsibility, has a chairman who understands the importance of his or her position and ensures that it maintains the confidence of management. Discuss the relationship of AC and internal audit. The author posited that the role of the AC in an organisation has been considered with particular emphasis on providing an internal audit perspective. Discuss on how to improve the relationship of the AC and internal audit. Internal auditors should see the establishment and operation of an AC as ideal opportunity to improve their service to management. However, they must be proactive and educate the committee on the real benefits of a good internal audit function. An effective and harmonious relationship between the AC and internal audit can have a profound beneficial effect on corporate management and control.

Table 1 (Continued): Annotated Literature Review on AC Overseeing the Quality of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Abbott, L., Parker, S., Peters, G., & Rama, D.V. (2003)	Examine the association between AC effectiveness and internal audit outsourcing.	Data obtain from a survey of 219 CIAs and from relevant proxy statements filed in 2001. Final sample consists of 287 usable responses.	Use regression models to test the hypotheses.	Companies with effective ACs are less likely to outsource internal auditing to the external auditors. Effective ACs also has authority over the CIAs' dismissals and has an incrementally negative relation with the extent of outsourcing.	Do not differentiate between alternative explanations for the findings.

2.5 AC Ensuring the Independence of the Internal Audit Function

2.5.1 Introduction

According to the Institute of Internal Auditors (IIA), internal auditing is an independent, objective assurance and consulting activity designed to evaluate and improve an organisation's operations. Both the organisational independence of the internal audit function and the individual objectivity of internal auditors are important features as proposed by IIA. The standards require that the CIA report to a level within the organization that allows the internal audit function to fulfil its responsibilities. To achieve necessary independence, best practices suggest that the CIA should report directly to the AC or its equivalent. For day to day administrative purposes, the CIA should report to the most senior executive (IIA, 2010).

The IIA recognises that ACs and internal auditors have interlocking goals. A good working relationship between the internal auditors and a company's AC is necessary. A direct channel of communication between the CIA and the AC is required such as provisions for the CIA to have access to the AC, to attend AC meetings, to present the audit plan, to report on the results of major audits and key audit findings or other matters, and to discuss internal auditing observations on risk and internal controls within the organisation (IIA, 2010). Moreover, CIA and AC should meet regularly without the presence of senior management and the external auditors.

The sub-sections below present, discuss and annotate the extant literature that has examined the relationship between AC and internal audit function independence.

2.5.2 Extant Studies

Goodwin and Yeo (2001) argued that the relationship between internal audit and AC may affect organisational independence while the use of the internal audit function as a management training ground may affect individual objectivity. Using a survey of CIAs in Singapore, they found that an effective AC can strengthen the position of the internal audit function by acting as an independent forum in which internal auditors may raise matters affecting management.

Moreover, in a recent study, Christopher et al. (2009) analysed the independence of the internal audit function through its relationship with the management and the AC. Based on survey of 34 CIAs from the Australian corporate sector, they identified a number of threats to independence including having the CEO and CFO approve the internal audit budget and being involved in the audit plan, not reporting functionally to the AC, the AC not having sole responsibility for appointing and dismissing the CIA and a lack of AC accounting expertise.

In New Zealand, Van Peursem (2005) examined the internal auditor's role and addressed how an effective internal auditor can overcome the tension of working with management to improve performance while also remaining sufficiently distant (independence) from management in order to report on their performance. The results indicated that an internal auditor's close relationship with management can place their independence from management at risk.

On the other hand, Schneider and Wilner (1990) examined the effects of managers' perceptions of internal and external auditing on the potential commission of financial reporting irregularities. The authors found that in settings where the internal audit function is independent, in terms of reporting level, this will lead to an improved control environment and a reduction in reporting errors results. Their findings are also supported by Grambling et al. (2004) that independence through proper reporting relationship is viewed as the most focal criteria.

Independence of the internal audit function may also be affected depending on whom has the responsibility and authority for hiring and firing the CIA. McHugh and Raghunandan (1994) found that a large majority of the internal auditors indicated that vesting hiring or firing authority with the AC would enhance the independence of the internal audit function and improve the ability of internal auditors to generate action on audit findings.

On the other hand, taking a cognitive perspective of internal auditor independence, Ahmad and Taylor (2009) developed measures for the concepts of commitment to independence, role conflict and role ambiguity in the context of the internal auditor's work environment, in order to provide evidence of the effect of the role conflict and ambiguity, and their sub-dimensions, on the internal auditor's commitment to independence. The results revealed that both role

ambiguity and role conflict are significantly negatively related to commitment to independence.

2.5.3 Comparative Assessment

Based on the above studies, a discussion is now provided on the effects of AC in ensuring the independence of the internal audit function. The results of many studies (Schneider and Wilner, 1990; McHugh and Raghunandan, 1994; Goodwin and Yeo, 1998; Van Peursem, 2005; Christopher et al., 2009) posited that the independence of the internal audit function plays an important role in an organisation. The broaden responsibilities of the internal audit function within the environment of a changing business world, coupled with increasing economic competition and globalisation are creating pressure on the internal audit function which can jeopardise its independence (Mutchler et al., 2001).

Goodwin and Yeo (2001), Van Peursem (2005) and Christopher et al. (2009) took a similar research approach by investigating the independence of internal audit function through the working relationship with the management and AC. Although the three studies are conducted in different countries (Singapore, Australia and New Zealand respectively) where the reporting environment is different, all of the three studies produced the same results. Based on a survey of CIAs, Goodwin and Yeo (2001) and Christopher et al. (2009) found that an effective AC (performing all their duties) can strengthen the independence position of the internal audit function. In addition, Van Peursem (2005) made observations, examined documents and interviewed senior internal auditors in six New Zealand organisations to find that internal auditors close relationship with management can place their independence at risk.

On the other hand, both Schneider and Wilner's (1990) and Ahmad and Taylor's (2009) studies investigated the perception of the internal auditor independence. Schneider and Wilner (1990) looked at the effects of managers' perceptions of internal and external auditing on the potential commission of financial reporting irregularities in the United States while Ahmad and Taylor (2009) developed measures for the concepts of commitment to independence. Schneider and Wilner (1990) found that independence through proper reporting relationship is important. Whereas, Ahmad and Taylor's (2009) study conducted in Malaysia suggested that ambiguity in both the exercise of authority by the internal auditor

and time pressure faced by internal auditors plus conflict between the internal auditors' and managements' personal values have the greatest impact on commitment to independence.

2.5.4 Tabulated Annotations

The annotated literature review on AC ensuring the independence of the internal audit function is presented in Table 2.

Table 2: Annotated Literature Review on AC Ensuring the Independence of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Goodwin-Stewart, J., & Yeo, T.Y. (2001)	Argue that the relationship between internal audit and AC may affect organisational independence while the use of the internal audit function as a management training ground may affect individual objectivity.	A total of 80 questionnaires are mailed, 27 to CIAs of listed companies and 53 to CIAs of unlisted companies. A total of 65 responses are received.	Data are collected by means of a questionnaire sent to CIAs of both listed and unlisted companies in Singapore.	A strong relationship between the AC and the internal audit function is found, with the level of interaction being greater when AC is comprised solely of independent directors. The use of the internal audit function as a management training ground is also found to be quite widespread in Singapore.	All respondents are members of the IIA and hence there may be a bias towards those who are career internal auditors rather than manager who are only temporarily employed as internal auditors. The sample size is relatively small, possibly leading to non-significant results. Future research: An analysis of the interaction between internal audit and AC will provide a complete picture.

Table 2 (Continued): Annotated Literature Review on AC Ensuring the Independence of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Christopher, J., Sarens, G., & Leung, P. (2009)	Analyse critically whether internal audit function in practice are operating independently, in line with theoretical best practice guidelines.	The questionnaire is electronically distributed as an attachment to an e-mail cover letter sent by IIA Australia to their list of CIAs in the corporate sector. This represents a sample size of 206. A total of 34 responses are received, representing a response rate of 17 per cent.	Results are based on a critical comparison of responses from questionnaires sent to Australian CIAs versus existing literature and best practice guidelines.	With respect to the relationship with the AC, significant threats identified include CIAs not reporting functionally to the AC; the AC not having sole responsibility for appointing, dismissing and evaluating the CIA; and not having all AC members or at least one member qualified in accounting.	Limited number of respondents can be an impediment to generalisation of the results. Questionnaire is only sent to IIA members. Different levels of independence threats are considered to exert the same level of impact, though it can be reasonably assumed that some threats exert a stronger influence than others. Future research: Undertake research in other countries to identify whether the findings of this study are a worldwide phenomenon or a localised issue.

Table 2 (Continued): Annotated Literature Review on AC Ensuring the Independence of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Van Peursem, K.A. (2005)	Examine the New Zealand internal auditor's role and conceptualise on the auditor's influence over the role and how an effective internal auditor can overcome the tension of working with management to improve performance while also remaining sufficiently distant from management in order to report on their performance.	Six New Zealand organisations.	An Eisenhardt-inspired multiple case-based approach is applied in which the researcher make observations, examined documents and interviewed senior internal auditors in six NZ organisations.	Three concepts characteristics of those who best balanced their role: the internal auditor's external professional status, the presence of a formal an informal communication network and the internal auditor's place in determining their own role. Informing these concepts is the auditor's ability to manage ambiguity.	Qualitative study generally is less objectively-measured. Future research: (1) Explore each source of influence in more detail and in different contexts and examine the framework's application elsewhere. (2) Gender studies may be of value.

Table 2 (Continued): Annotated Literature Review on AC Ensuring the Independence of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Schneider, A., & Wilner, N. (1990)	Examine the effects of managers' perceptions of internal and external auditing on the potential commission of financial reporting irregularities. Test whether the deterrence effects of internal and external auditing are similar.	A total of 264 subjects, the vast majority of whom are experienced managers, make decisions on three cases involving financial reporting issues.	Use the quantitative randomized response technique.	The results support internal and external auditing as deterrents to financial reporting irregularities when all of the following four conditions are present: material dollar amounts, irregularities involving asset overstatements, unambiguous GAAP violations and less incentive for misstating income. Internal auditing effects are similar to those external auditing.	Lack of significance obtains for some of the statistical tests. Despite the authors' effort to assure anonymity by means of using the randomized response technique, some subjects still may have been reluctant to report truthfully. Inability to explain why the existence of audits is perceived as having deterrent effect. Be careful about the generalisability of the results.

Table 2 (Continued): Annotated Literature Review on AC Ensuring the Independence of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
McHugh, J., & Raghunandan, K. (1994)	Examine how CIAs are hired and fired.	Final sample consists of 471 usable responses. Responses from internal auditors from governmental and non-profit organizations are not included in this analysis since they differ substantially from for-profit entities. Responses from companies without an AC are also deleted.	A questionnaire is mailed to a randomly selected list of 1,000 CIAs with the help of the IIA.	A large majority of the internal auditors indicate that vesting hiring or firing authority with the AC would enhance the independence of the internal audit function, reduce oversight by the AC and improve the ability of internal auditors to generate action on audit findings.	

Table 2 (Continued): Annotated Literature Review on AC Ensuring the Independence of the Internal Audit Function

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Ahmad, Z., & Taylor, D. (2009)	Develop measures for the concepts of commitment to independence, role conflict and role ambiguity in the context of the internal auditor's work environment.	The sample is drawn from the database of the IIAM in which listed companies with an in-house internal audit function are extracted. A total of 101 useable responses are obtained.	To measure these concepts, scales are developed for a questionnaire by drawing on measures established in the organizational behaviour literature and adapting these to the internal auditor's context.	Both role of ambiguity and role of conflict are significantly negatively related to commitment to independence. The underlying dimensions found to have the greatest impact on commitment to independence are: first, ambiguity in both the exercise of authority by the internal auditor and time pressure faced by internal auditor, and second, conflict between the internal auditor's personal values and both management's and their profession's expectations and requirements.	Future research: (1) Outsource internal auditor should be considered. (2) Other independent variables could be modelled. (3) Alternative research methods (an experimental design) could provide considerable refinement to the understanding of the relationships between the variables in this study.

2.6 AC Facilitating the Quality of the External Audit

2.6.1 Introduction

This study examines the association between the effectiveness of AC roles and the quality of external audit using audit fees. Francis (2004) argued that a higher audit fees imply higher audit quality. A higher audit quality should improve the quality of financial reporting and reduce the risk of the external auditors providing an incorrect audit opinion (Goodwin and Kent, 2006).

An AC may be expected to exert two-way pressure on audit fees (Collier and Gregory, 1996). The association of AC with external audit can be explained either from the demand for audit services by the client or the supply of audit services by the external auditors. The demand side of the argument suggests that ACs are likely to demand higher quality of audit because ACs will ensure that the audit hours are not reduced to a level where the quality of audit would be compromised and may also require additional work to be performed by the external auditors.

For example, ACs might insist that the external auditors set the materiality limit at a lower level resulting in increased testing (Goddard and Masters, 2001). Evaluating the scope of external auditors' audit plan, work and conclusions, is highly regarded as a vital role of the AC by the Cadbury Committee (1992), Blue Ribbon Committee (1999) and ASX CGC (2007). AC members also have incentives to ensure a high quality audit in order to reduce the risk of litigation and loss of reputation in the event of fraudulent financial reporting (Goodwin and Kent, 2006). Thus, under this approach, stronger ACs will be willing to incur greater total audit fees to ensure a higher level assurance.

On the other hand, from the supply side of the argument, ACs may reduce the audit fees at the same time. One of the AC's roles is to oversee and review the internal controls within the company. The AC's involvement in tightening internal controls might help to reduce the assessed level of control risk and substantive testings by the external auditors and hence lead to a lower audit fees (Goodwin and Kent, 2006).

However, the two-way pressure (demand and supply) exerted by the ACs on audit fees could cancel out, causing no observed relationship. O'Sullivan (1999) provided evidence that the

board and AC characteristics do not influence external auditors' pricing decisions due to the conflicting pressures of the demand and supply theories on the audit fees. Furthermore, it could be argued that the quality of AC characteristics is positively related to audit fees because an increase in audit hours will result from the need for the audit partner to liaise regularly with the AC, attend AC meetings throughout the year and prepare reports for the committee. Carcello et al. (2002), Abbott et al. (2003), Goodwin and Kent (2006), Singh et al. (2009) and Hoitash and Hoitash (2009) each give evidence on the relationship between ACs' characteristics and audit fees from the demand rather than supply of audit services. Therefore, this study is only able to examine the net effect of these two conflicting pressures.

The sub-sections below present, discuss and tabulate studies that have examined the relationship between AC and audit fees.

2.6.2 Extant Studies

Two Australian studies examined the impact of AC on audit fees. Using a sample drawn from all companies listed on the ASX, Goodwin and Kent (2006) examined whether the existence of an AC, AC characteristics and the use of internal audit are associated with higher external audit fees. The authors found that the existence of an AC, more frequent committee meetings and increased use of internal audit are related to higher audit fees. Also, the authors found that expertise of AC members is associated with higher audit fees when meeting frequency and independence are low. Moreover, Singh and Newby (2010) extended Goodwin and Kent (2006)'s study by using year 2005 publicly available information to analyse the relationship between internal audit and audit fees. The authors used given data for internal audit existence (proxy for internal audit activities) from secondary resources. Their findings supported Goodwin and Kent (2006)'s study.

Using 1991 United Kingdom data, Collier and Gregory (1996) seek to establish whether ACs are effective in ensuring audit quality by protecting the auditors from fee cuts which might affect audit quality and signal tighter internal controls which help to reduce audit time and hence audit fees. They found that the relationship between size-related audit fees and the presence of an AC is positive, although they found only weak support for a decreasing effect based on the risk and complexity-related audit fees.

In post-Cadbury regulation reform, Goddard and Masters (2001) tested the relationship between size of the audit fees and the existence of an AC for United Kingdom companies for the years ending in 1994 and 1995. The results of the study showed no evidence that ACs have any overall effect on audit fees. However, the authors also found inconclusive and conflicting results on complexity and risk-related audit fees and the existence of an AC.

In addition, in a more recent United Kingdom study, Zaman et al. (2011) examined the influence of AC effectiveness, a proxy for governance quality on audit fees using a new composite measure comprising AC independence, expertise, diligence and size. The study used the UK FTSE-350 which represented a good mix of large and relatively small United Kingdom companies during the period 2001-2004. The findings indicated that after controlling for board of director characteristics, there is a significant positive association between AC effectiveness and audit fees only for larger client.

In a New Zealand setting, Rainsbury et al. (2009) investigated the association between the quality of ACs and financial reporting quality and external audit fees, respectively, in an environment where the formation of ACs was unregulated. The study used a sample of 87 firms and the result showed no significant association between the quality of an AC and the level of fees paid to external auditors. The authors posited that the benefits of 'best practice' ACs may be less than anticipated by regulators and policy markers.

On the other hand, in Israel, Lifschutz et al. (2010) examined the association between corporate governance characteristics and external audit fees in large public companies. Using a sample size of 100 largest companies, the authors found that AC diligence (number of meetings) is positively and significantly associated with audit fees. The results are consistent with the demand-based perspective of audit services, wherein firms with strong corporate governance characteristics demand additional assurance from the auditors and higher quality, resulting in higher external audit fees.

In the United States, Carcello et al. (2002) studied the relations between board characteristics and AC characteristics and audit fees for Fortune 1,000 companies audited by Big 6 auditors. They found that significant positive relations between audit fees and AC independence, diligence and expertise. Also, Abbott et al. (2003) examined the relationship between AC and

audit fees for a sample 492 non-regulated American firms audited by Big 5 auditors. They found that AC independence and financial expertise are positively related with audit fees but found no significance for AC meetings.

In the post Sarbanes Oxley Act (SOX) period, Hoitash and Hoitash (2009) examined the association between AC characteristics and auditor's compensation and dismissals using a large sample of 2,393 public companies audited by large and small auditors. It is observed that strong ACs demand higher level of assurance and is less likely to dismiss their auditors. Further, an increase is found in auditor's independence as measured by reduced board involvement and less dismissals following an unfavourable audit opinion.

Last but not least, Yatim et al. (2006) examined the association between external audit fees and board and AC characteristics of 736 Malaysian listed firms. Contradictory to other studies, Yatim et al. (2006) hypothesised that good AC characteristics reduce auditor's assessments, resulting in lower audit fees. The authors found that external audit fees are negatively and significantly related to board independence, AC expertise and the frequency of AC meetings.

2.6.3 Comparative Assessment

Based on the discussion above, the results of the previous studies are mixed. Most studies show that the quality of AC characteristics are positively related to the level of audit fees (Carcello et al., 2002; Abbott et al., 2003; Goodwin and Kent, 2006; Yatim et al., 2006; Hoitash and Hoitash 2009; Lifschutz et al., 2010; Singh and Newby, 2010; Zaman et al., 2011) while others find no significant association (Goddard and Masters, 2001; Rainsbury et al., 2009).

The finding of Goddard and Masters (2001) are much different from the rest of the studies conducted because the authors investigated the effect of AC on audit fees adherence to the Cadbury Committee Report recommendations of 1992 by using data collected from financial reports for the years ending in 1994 and 1995. It could be argued that the effect of environmental changes is likely to increase the quality of all audits, irrespective of the presence of an AC.

Rainsbury et al. (2009) also found no significant association between the quality of an AC and the level of fees paid to external auditors in New Zealand. The authors tested a sample of 87 firms including 29 that have adopted a high quality AC in an environment where the formation of AC was unregulated. Thus, their study is subjected to data availability and a small sample size which may cause the results to be insignificant. Moreover, the study only focused on AC membership in terms of independence and expertise but a number of other AC attributes such as business backgrounds of the members and the number of years they have served on the AC have not been tested (Rainsbury et al., 2009).

On the other hand, Collier and Gregory (1996) found the relationship between size-related audit fees and the presence of an AC is positive but found only weak support for a decreasing effect based on the risk and complexity-related audit fees. The difference between the two results may be due to difference in variable definition. Moreover, Collier and Gregory (1996) conducted their study using 1991 data and great transformation have taken place in the audit setting since then that their findings are less applicable in current today's environment.

2.6.4 Tabulated Annotations

The annotated literature review on AC facilitating the quality of the external audit is presented in Table 3.

Table 3: Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Goodwin-Stewart, J., & Kent, P. (2006)	Examine whether in an Australian setting, the existence of an AC, AC characteristics and the use of internal audit are associated with a higher level of audit fees.	A questionnaire is sent to all companies listed on the ASX in October 2000 (approximately 1400 companies), seeking information on their internal audit activities. Collect data from the annual reports which included both financial variables relating to size, profitability, risk and audit fee and non-financial variables concerning corporate governance, external audit, and the complexity of the entity. Final sample consists of 401 companies.	To test hypotheses, the study uses a number of ordinary least squares (OLS) regression models, extending the traditional audit fee model.	The existence of an AC is associated with a higher level of audit fees. More frequent AC meetings are associated with higher audit fees. Committee independence and accounting and finance expertise are not significantly associated with audit fees. Expertise is associated with higher audit fees when both meeting frequency and independence are low. The use of internal audit is associated with higher external audit fees.	The number of employees in internal audit may not be a good measure of the use of internal audit as it do not take into account the use of outsourcing or of secondment of employees into internal audit on a temporary basis. Future research: (1) More refined measures of independence, expertise and diligence of AC members. (2) Need to distinguish between supply side and demand side effects on audit fees and to unravel the complex interrelationships between the various monitoring mechanisms.

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Singh, H., & Newby, R. (2010)	Examine the direction of the relationship between a firm's internal audit function and its external audit fees, extending previous study by Goodwin-Stewart and Kent (2006).	Data are gathered from the annual reports of the top 300 publicly listed companies in Australia during the year 2005.	Hypotheses are tested via ordinary least squares (OLS) regression with identical control variables similar to those used by Goodwin and Kent (2006). For the OLS regression models, the existence of an internal function proxy for internal audit usage came from secondary sources.	The findings support Goodwin and Kent (2006)'s result that the existence of an internal audit function in a firm has a significantly positive relationship with audit fees. In fact, the strength of this relationship has increased since 2000.	The study focuses on the top 300 public companies from a market capitalisation perspective and, therefore, the results may not be generalisable to other smaller public companies or to private firms. Dichotomous experimental variable used in the study might not be an ideal measure of internal audit usage since it may not be sensitive enough to capture all the variation in external audit fees.

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Collier, P., & Gregory, A. (1996)	Seek to establish whether ACs are effective in ensuring audit quality by protecting the auditors from fees cuts which might affect audit quality, and signal tighter internal controls which help to reduce audit time and hence audit fees.	The sample is constructed by sending questionaries on ACs to all firms which are members of the Financial Times All Share Index (FTASI) in December 1991 and for which accounting records (on the Stock Exchange Micro-Fiche Service) are available for the years ended in 1991, 1990 and 1989. Final sample consists of 315 responding firms.	The hypotheses are tested by developing a regression model for the audit fees. Quality aspect of the audit can be captured through a dummy firm size variable, whilst the internal control aspects can be captured through dummy risk and complexity variables.	The relationship between size-related audit fees and the presence of an AC is positive and statistically significant, but that although there is a negative relationship between risk-related and complexity-related audit fees and the presence of an AC, the relationships are not conclusively significant. The findings provide support for the contention that ACs are at least partially effective in preventing reductions in the audit fee to levels where the quality of the audit may be compromised.	Non-response tests clearly show some size bias in responding companies, although there is no evidence of any industry bias. Nevertheless, given sample size, the authors believe that this size bias is unlikely to be a serious problem.

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Goddard, A. R., & Masters, C. (2001)	Report an analysis of the relationship between the size of the audit fees and the existence of an AC. Investigate the effect on audit fees of AC adherence to the Cadbury Committee Report recommendations of 1992.	Data is collected from financial reports for the years ending in1994 and 1995. The population test consists of companies listed on the Stock Exchange and included in the Times 1,000 of 1996, excluding the top 350. Final sample consists of 233 companies in 1994 and 223 in 1995, nine companies having ceased to exist in the interim.	Data is analysed using two multiple regression models.	ACs have been through a transitional phase comprising changes to the general audit environment and a learning phase for the establishment and operation of committees. By 1995 there is no evidence that ACs, whether adhering to the Cadbury Code or not, have any overall effect on audit fees. The only effect found is a reduction in fees due to improved internal controls in the presence of auditee's complexity. There is evidence that size is the main determinant of the presence of an AC.	

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Zaman, M., Hudaib, M., & Haniffa, R. (2011)	Extend prior research on the relationship between governance quality and auditor remuneration. Examine the influence of AC effectiveness, a proxy for governance quality on audit fees and non-audit services fees using a new composite measure comprising AC independence, expertise, diligence and size.	The population of the study is the UK FTSE-350 which represented a good mix of large and relatively small UK companies during the period 2001-2004. The final sample consists of non-financial UK FTSE-350 companies with a total number of 540 company year observations.	Use a number of ordinary least squares regression models to help to explore further the various relationship between AC effectiveness and audit fees and non-audit fees while controlling for other variables.	After controlling for board of director characteristics, there is a significant positive association between AC effectiveness and audit fees only for larger clients. Indicate that effective ACs undertake more monitoring which results in wider audit scope and higher audit fees. Findings support regulatory initiatives aimed at improving corporate governance quality.	Use only four factors in the composite measure of AC effectiveness in different regulatory and institutional contexts. Use dichotomous measure of financial expertise, coded 1 if at least one member in the AC has financial expertise, and 0 other wise. The definition of financial expertise is perhaps too broad and encompasses skills that may not necessarily contribute to AC effectiveness.

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Rainsbury, E.A., Bradbury, M., & Cahan, S.F. (2009)	Examine firms that voluntarily adopt a high quality AC in an environment, New Zealand, where prior to 2003, the formation of ACs is completely unregulated. Examine whether New Zealand firms with high quality ACs in 2001 has higher financial reporting quality and lower external audit fees than New Zealand firms with a lower quality AC or no AC.	The population of interest is all NZ companies listed on the NZX main trading board in the 2001 Datex Investment Guide. Final sample consists of 87 firms. Financial and AC membership data are hand collected from the 2001 annual reports of the sampled firms.	Measure AC quality based on the quality of its membership using guidelines that were issued by the New Zealand Securities Commission (NZSC) in 2004. Measure financial reporting quality by adopting five accounting choices (estimated useful life of buildings, estimated useful life of motor vehicles, goodwill amortization, tax effect accounting and assigning costs to inventory) and then use these to create an accounting quality score.	No significant association between the quality of an AC and the quality of financial reporting. These results are robust to alternative measures of earnings quality. The quality of ACs have little impact on the level of fees paid to external auditors. The results suggest that the benefits of 'best practice' ACs may be less than anticipated by regulators and policymakers.	Focus on AC membership in terms of independence and expertise, but a number of other AC attributes such as the business backgrounds of the AC members and the number of years they have served on the AC have not been tested.

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Lifschutz, S., Jacobi, A., & Feldshtein, S. (2010)	Examine the association between corporate governance characteristics and external audit fees in large public companies in Israel.	The sample includes 100 largest public companies on the Tel-Aviv 100 Stock Exchange Index with the exception of banks, insurance companies and dual-listed companies which have a distinct financial reporting.	Use multiple regressions to test the hypotheses of the study.	Show that board independence and AC diligence are positively and significantly associated with audit fees.	Small sample cover one year of Israeli data. The results may not be generalised over different time period and countries. Only a few corporate governance variables were tested. Future research: Other variables such as managerial ownership and internal control can be considered.

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Carcello, J.V., Hermanson, D.R., Neal, T.L., & Riley JR, R.A. (2002)	Examine the relations between three board characteristics (independence, diligence and expertise) and Big 6 audit fees for Fortune 1000 companies.	A questionnaire is sent to the controllers of all Fortune 1000 companies asking them to provide the amount of their external audit fee for the fiscal year ended between April 1992 and March 1993.	Use single-equation approach to test the hypotheses.	There is a significant positive relation between audit fees and board independence, diligence and expertise. The results persist when similar measures of AC "quality" are included in the model.	The sample is limited to very large public, non-financial companies and the extent to which the results apply in other settings is uncertain. There may be exogenous factors at the entity level that are correlated both with the board characteristics. Could not rule out the possibility that a more independent, diligent and expert board simply exhibits less price resistance.

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Abbott, L.J., Parker, S., Peters, G.F., & Raghunandan, K. (2003)	Examine the association between certain AC characteristics (independence, financial expertise and meeting frequency) and one economic aspect of the auditor-management relationship, audit fee.	Examine a sample of 492 non-regulated, Big 5-audited firms that filed proxy statements with the SEC in the period from February 5, 2001 to Jun3 30, 2001.	Use cross-sectional regression model to examine the association between AC characteristics and audit fees.	AC independence (defined as an AC comprised entirely of outside, independent directors) and financial expertise (defined as an AC containing at least one member with financial expertise) is significantly, positively associated with audit fees. Meeting frequency (defined as an AC that meets at least four times annually) is not associated with higher audit fees at conventional levels.	Future research: (1) Incorporating actual audit hours and AC characteristics can shed additional light on which of the two explanations drive the higher audit fees. (2) Emphasise subsequent changes in other corporate governance mechanisms that may be either complements or substitutes for AC activities. (3) Focus of research in this area may shift to an exploration of AC processes and decision making.

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Audit

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Hoitash, R., & Hoitash, U. (2009)	Examine the association between AC characteristic and auditor related decisions following the mandated changes in its composition and responsibilities.	Use large sample comprises of 2,393 public companies audited by large and small auditor with complete data for fiscal year 2004.	Define AC expertise as the percentage of experts on the AC (PFE); AC size is measure as the number of board members on the AC (ACSIZE); and AC diligence is measure by the number of AC meetings (ACMEETING). Construct composite measure for the overall strength of the board using size, independence and the frequency of board meetings.	Financial experts are associated with higher audit fees. AC size and the frequency of AC meetings are positively associated with audit fees. The measure of the board of directors is not associated with audit fees. Strong ACs might choose to authorize less non-audit services, possibly in order to contribute to the perception of auditors' independence. Observe stronger ACs are less likely to dismiss their auditors and there is no association between the issuance of new going concern reports and auditor dismissals.	Audit fees are determined based on the supply and the demand for audit services. Not able to detangle the impact of the demand and supply on audit fees but rather measure their combined effect. Audit fees are used as a level of proxy for the level of assurance which might not fully measure the quality of work performed by auditors. Dismissal decisions are often reached jointly by auditors and their clients. Inability to fully observe these decisions might bias results.

Table 3 (Continued): Annotated Literature Review on AC Facilitating the Quality of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Yatim, P., Kent, P., & Clarkson, P. (2006)	Examine the association between external audit fees and board and AC characteristics of 736 Malaysian listed firms.	The sample comprises of the Bursa Malaysia non-financial public listed companies in year 2003.	Multiple regression analysis is used to estimate the relationships proposed in the hypotheses.	External audit fees are positively and significantly related to board independence, AC expertise and the frequency of AC meetings. There is a strong negative association between external audit fees and Bumiputra-owned firms.	Cannot be generalised and should be interpreted in the context of the Malaysian corporate environment, particularly where ethnicity is concerned. The financial and corporate data employ in this study and the findings thereafter may not completely explain the link between governance variables and external audit fees as other variables such as detailed ownership structures are likely to better explain the relationship.

2.7 AC Ensuring the Independence of the External Auditors

2.7.1 Introduction

In an organisation, the responsibilities of the external auditors are to review the annual financial reports, monitor and verify the actions of management and express an independent audit opinion to the shareholders of the company. In order to reduce agency costs from the separation of ownership between the management and shareholders, it is in the shareholders' best interest to employ the external auditors. Therefore, external auditors must be independent from the company's financial report, ownership structures and internal controls.

Although shareholders ultimately appoint the external auditors, management's influence in the decision process regarding the initial appointment and subsequent reappointment of the external auditors, shareholders are concerned about the independence of the auditors in protecting their interest (Firth, 1997). Since, the independence of external auditors will be hard to observe, shareholders will depend on the auditor's good reputation, professional bodies, regulators and audit fees to monitor the external auditors. Fees paid to external auditors consist of audit fees as well as fees paid for other services. While all fees potentially create economic bonds between the auditor and the client, critics have alleged that the provision of non-audit services gives audit firms incentives to agree with management accounting choices, thus reducing auditor's independence and ultimately the quality of financial reporting (Coulton et al., 2007).

The sub-sections below present and assess previous papers that have investigated the relationship between AC and the independence of the external auditors and a summary table of annotated literature review is also presented.

2.7.2 Extant Studies

Previous studies have examined the economic bond (i.e., non-audit service fees) between the audit firm and its client (DeAngelo, 1981; Prakash and Venable, 1993; Firth, 1997; Frankel et al., 2002; Ashbaugh, 2003). These studies used the ratio of non-audit fees to total audit fees as the measure of the economic bond. The provision of non-audit services to audit client (management) will increase the economic bond between the auditor and the client. This can compromise the external auditor independence. DeAngelo (1981) examined whether audit

fees below total current costs on initial audit engagements ('low balling') impairs auditor independence. The author defined audit quality as the probability of detecting errors and the probability of reporting the errors. These attributes are analogous to competence and independence, respectively. The results of the study showed that 'low balling' does not impair independence.

Using the ratio of non-audit service fees to audit fees as a proxy of the independence of external auditors, Prakash and Venable (1993) investigated the effects of agency incentives and knowledge spill-overs in joint engagements for audit and non-audit services. The frequency of non-audit service is expected to reflect knowledge spill-overs from joint engagements and the level of economic bonding between the auditor and the company. They found that firms with higher agency costs are likely to purchase higher level of audit quality and thus limit the demand for non-audit services purchases from their current auditor.

Moreover, Firth (1997) developed a model that seeks to explain a company's decision to hire non-audit services from the auditor. The author argued that companies faced with potentially high agency costs will purchase relatively smaller amounts of non-audit services from their auditors. This is because high agency cost companies need independent auditors in order to reassure investors and creditors.

In the United States, Frankel et al. (2002) examined whether the audit fees are associated with earnings management and market reaction to the disclosure of auditor. Using data collected from proxy statements, the authors found that non-audit fees are positively associated with small earnings surprises and the magnitude of discretionary accruals while audit fees are negatively associated with these earnings management.

Moreover, Ashbaugh et al. (2003) challenged the findings of Frankel et al. (2002) by using a different research approach in their study, adjusting discretionary current accruals for firm performance. In contrast to Frankel et al. (2002), the authors found no relation between positive discretionary accruals and any of the auditor fees when discretionary accruals are adjusted for firm performance and sample firms are partitioned by income increasing versus income decreasing accruals. They also found no systematic evidence that auditors violate their independence as a result of clients purchasing relatively more non-audit services.

Prior to SOX, Abbott et al. (2003) examined the association between AC characteristics and the ratio of non-audit service fees to audit fees. Using a sample of 538 firms, the authors found that ACs comprised solely of independent directors, meet at least four times annually are significantly and negatively associated with the non-audit service fees ratio. This evidence is consistent with AC members perceiving a high level of non-audit service fees in a negative light and taking action to decrease the non-audit service fees ratio.

Meanwhile, in the post SOX period, Hoitash and Hoitash's (2009) study investigated the association between AC characteristics and non-audit service fees. They hypothesized that there is an inverse relationship between the non-audit fees to total fees ratio and indicators of stronger ACs. Similar to the findings of Abbott et al. (2003), the authors found that strong ACs might choose to authorize less non-audit services, possibly in order to contribute to the perception of auditor independence.

In a recent Australian study, Lary and Taylor (2011) examined the association between AC's governance characteristics and their role effectiveness. The sampling frame is Australian listed companies, over the year 2004 to 2009, consisting of 180 observations. The results of the study showed that greater AC diligence, but not independence or competence is significantly related to lower non-audit fees ratio (higher independence of external auditors).

Moreover, in the United Kingdom, Zaman et al. (2011) examined the influence of AC effectiveness, a proxy for governance quality on non-audit fees using a new composite measure comprising AC independence, expertise, diligence and size. The study used the UK FTSE-350 which represented a good mix of large and relatively small UK companies during the period 2001- 2004. The authors found that the association between AC effectiveness and non-audit fees to be positive and significant, especially for larger clients. This suggested that a larger client is more likely to purchase non-audit services even in the presence of effective ACs, probably due to the complexity of the client's activities.

2.7.3 Comparative Assessment

The results of DeAngelo (1981), Prakash and Venable (1993), and Firth (1997) indicated that non-audit service fees can threaten the independence of external auditors. Moreover, the results of prior studies in the pre and post SOX periods (Abbott et al., 2003; Hoitash and

Hoitash, 2009; Lary and Taylor, 2011; Zaman et al., 2011), suggested that good AC characteristics will enable the AC to actively monitor and influence the firm's non-audit service fees purchase decisions.

DeAngelo (1981) developed a model to test the hypothesis that the higher the economic bond between the audit firm and client (management), the higher the audit firm's dependence on the client. Prakash and Venable (1993) and Firth (1997) respectively used the same method by applying the ratio of non-audit service fees to audit fees (proxy of external auditor's independence) and tested whether management manage the level of non-audit service fees purchased from their current auditor. Both consistently find that firms with higher agency costs are likely to purchase a higher level of audit quality and thus limit the demand for non-audit services purchases from their auditor.

Furthermore, motivated by regulatory action and criticism of non-audit service fees, Frankel et al. (2002) and Ashbaugh et al. (2003) have used indicators of earnings management and market reaction as a proxy for differences in the quality of financial reporting. The results of Ashbaugh et al.'s (2003) discretionary accruals tests differ from Frankel et al. (2002) because the authors used a different research method to identify the extent of possible accounting manipulation where discretionary current accruals for firm performance are adjusted. Moreover, Frankel et al.'s (2003) results are sensitive to sample selection and governance attributes. There is also a possibility that the sharply increased regulatory focus accompanying the statutory disclosure of United States's audit and non-audit service fees might have encouraged the management to manipulate some of the fees beyond what may have otherwise occurred.

However, neither of these studies examines the relationship between AC characteristics and non-audit service fees purchases. The role of an AC is to ensure the independence of external auditors by monitoring the extent of non-audit service fees supplied by the auditor to the management. Currently, there are four studies (Abbott et al., 2003; Hoitash and Hoitash, 2009; Lary and Taylor, 2011; Zaman et al., 2011) that examine these association. Although Abbott et al.'s (2003) study is conducted in the pre-SOX period and Hoitash and Hoitash's (2009) study is conducted in the post-SOX period, both studies consistently found the same results. This is evident that indicators of strong ACs are associated with a lower ratio of non-

audit service fees to total audit fees. On the other hand, the findings of two more recent studies are different. Lary and Taylor (2011) found that AC diligence is significantly related to lower non-audit fees ratio but Zaman et al. (2011) found that AC characteristics are positively and significantly associated with non-audit fees in larger companies. It can be argued that the difference between the findings of these two studie is due to sample size.

2.7.4 Tabulated Annotations

The annotated literature review on AC ensuring the independence of the external auditors is presented in Table 4.

Table 4: Annotated Literature Review on AC Ensuring the Independence of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
DeAngelo, L. (1981)	Investigate the allegations of the Commission on Auditors' Responsibilities and the Securities and Exchange Commission that 'low balling' on initial audit engagements impairs auditor independence.		Develop a model of inter temporal audit pricing when incumbent auditors possess cost advantages over competitors in future audits of a given client. These advantages occur due to significant start-up costs in audit technology and transactions costs of switching auditors. When incumbent auditors possess these advantages, they can raise future audit fees above the avoidable costs of producing audits.	Demonstrate that, contrary to these claims, 'low balling' does not impair independence; rather it is a competitive response to the expectation of future quasi-rents to incumbent auditors (due, e.g., to technological advantages of incumbency). 'Low balling' in the initial period is the process by which auditors compete for these advantages. Critically, initial fee reductions are sunk in future periods and therefore do not impair auditor independence.	

Table 4 (Continued): Annotated Literature Review on AC Ensuring the Independence of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Prakash, M., & Venable, C.F. (1993)	Investigate the effects of agency incentives and knowledge spill-over in joint engagements for audit and non-audit services.	Data from Fortune 500 companies, disclose under Accounting Series Release (ASR) No. 250. Ownership data for 1980 from the Corporate Data Exchange Stock Ownership Directory are collected form proxy statements.	A multiple regressions are used to test whether companies vary non-audit purchase in accordance with the potential agency costs that could arise.	The variables related to expected agency costs (management ownership, outside investment concentration, and leverage) significantly explain cross-sectional differences in the demands for recurring non-audit services. Companies purchase higher levels of recurring services when they engaged particular auditors (i.e., industry services or the audit firm that is the largest overall provider of non-audit services). Overall agency costs do not explain the level of non-recurring services purchased from the auditor.	Operationalisation of recurring and non-recurring services is difficult and may require finer partitioning. Managerial ownership unexpectedly is associated with non-recurring merger and acquisition services and is not associated with recurring systems or pension and personnel services. Restricted to publicly available data only. Future research: Explore how non-audit services influence auditor switching.

Table 4 (Continued): Annotated Literature Review on AC Ensuring the Independence of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Firth, M. (1997)	Seek to explain a company's decision to hire non-audit services from the auditor in UK.	Use data observations from 500 largest British companies. Data are extracted from Datastream, Exstat, annual reports and the Financial Times.	Use multiple regression models to test whether companies that face high agency costs purchase relatively smaller amounts of non-audit services.	Companies that have higher agency cost proxies are associated with smaller purchases of non-audit services from their auditors.	

Table 4 (Continued): Annotated Literature Review on AC Ensuring the Independence of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Frankel, R.M., Johnson, F.M., & Nelson, K.K. (2002)	Examine whether auditor fees are associated with earnings management and the market reaction to the disclosure of auditor fees.	Initial sample consists of 4,701 proxy statements on the SEC's Edgar database with filing date between February 5, 2001 and June15, 2001. Final sample consists of 3074 firms	Use multiple regression models to test the variables.	There is a positive association between non-audit fees and the likelihood of reporting a small earnings surprise, the magnitude of absolute discretionary accruals, and the magnitudes of both income-increasing and income-decreasing discretionary accruals. There is a negative association between audit fees and these earnings management indicators No association between total fees and any of these earnings management indicators, indicating that combining audit and non-audit fees into a single measure masks their differential incentive effects.	Future research: (1) Tests also suggest that size is an important conditioning variable in explaining the incentive effects of audit and non-audit fees. Future research could consider this and other economic circumstances that affect auditor incentives. (2) Analyses are based on the first year of disclosed fees. As additional years of data become available, research on changes in the market for audit and non-audit services and the effect of these changes on auditor incentives and financial reporting quality would be of interest.

Table 4 (Continued): Annotated Literature Review on AC Ensuring the Independence of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Ashbaugh, H., LaFond, R., & Mayhew, B.W. (2003)	Paper challenges the findings of Frankel, Johnson and Nelson (2002).	Collect data for 4959 firms from US registrants' 2000 proxy statements that are available on Edgar or Global Access during November and December of 2001. Final sample consists of 317 firms.	Replicate Frankel, Johnson and Nelson (FJN)'s empirical tests to investigate whether their results are sensitive to research design choices Use multiple regression models to test the variables.	Find no relation between positive discretionary accruals and any of the auditor fees metrics when discretionary accruals are adjusted for firm performance and sampled firms are partitioned by income increasing versus income decreasing accruals. No relation between fee ratio and the likelihood that firms beat analysts' forecasts. No evidence that the market reacts to the magnitude of non-audit fees relative to total fees.	

Table 4 (Continued): Annotated Literature Review on AC Ensuring the Independence of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Abbott, L.J., Parker, S., & Peters, G. (2003)	Examine the association between AC characteristics and the ratio of non-audit service fees to audit fees, using data gathered under the Securities and Exchange Commission's (SEC's) fee disclosure rules.	First examine all proxies filed with the Sec between February 5, 2001 and March 6, 2001. Expand the original sample of 310 firms; the authors then select a random sample of 250 proxy filings from March 19, 2001 to 30 June 2001. After deleting observations with missing variables, 538 companies remained.	Use multivariate regression to address research question.	Find ACs that consist of solely independent directors and that meet at least four times annually are significantly and negatively associated with non-audit service fees ratio. Consistent with AC member perceiving a high level of non-audit service fees in a negative light and taking actions to decrease the non-audit service fees ratio.	Cannot eliminate the possibility that management's attitude towards corporate governance drives both AC characteristics and choices related to auditor services. Data are from the initial period in which the SEC had required registrants to include information about audit and non-audit service fees paid to the auditor. Given the time frame and speed of the rule's enactment, the ability of managers to adjust the level of non-audit service fees provided by the incumbent auditor in response to the new disclosure requirements may have been limited.

Table 4 (Continued): Annotated Literature Review on AC Ensuring the Independence of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Hoitash, R., & Hoitash, U. (2009)	Examine the association between AC characteristic an auditor related decisions following the mandated changes in its composition and responsibilities.	Use large sample comprised of 2,393 public companies audited by large and small auditor with complete data for fiscal year 2004.	Define AC expertise as the percentage of experts on the AC (PFE); AC size was measured as the number of board members on the AC (ACSIZE); and AC diligence was measured by the number of AC meetings (ACMEETING).	Financial experts are associated with higher audit fees. AC size and the frequency of AC meetings are positively associated with audit fees. The measures of the board of directors will not be associated with audit fees. Strong ACs might choose to authorize less non-audit services, possibly in order to contribute to the perception of auditor independence. Observe stronger ACs are less likely to dismiss their auditors and there is no association between the issuance of new going concern reports and auditor dismissals.	Audit fees are determined based on the supply and the demand for audit services. Not able to disentangle the impact of the demand and supply on audit fees but rather measure their combined effect. Audit fees are used as a level of proxy for the level of assurance which might not fully measure the quality of work performed by auditors. Dismissal decisions are often reached jointly by auditors and their clients. Inability to fully observe these decisions might bias results.

Table 4 (Continued): Annotated Literature Review on AC Ensuring the Independence of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Lary, A.M., & Taylor, D.W. (2011)	Examine the association between AC's governance characteristics and their role effectiveness. To contribute a more comprehensive model and new evidence from Australia that complements and extend recent studies from different country settings on characteristics, roles and effectiveness of ACs.	The sampling frame is Australian listed companies over years 2004 to 2009, consisting of 180 observations.	The study applies multiple regressions to validate the hypotheses and models.	Reveal that stronger AC independence and competence, but not diligence, are significantly related to lower incidence and severity of financial restatements (i.e., to a higher integrity of financial statements). Greater AC diligence, but not independence or competence, is significantly related to lower non-audit fee ratio (i.e., to higher external auditor independence).	AC major role of monitoring the company's internal audit function is not integrated into the model of the study. Specific proxy measures use to represent the broader concepts of effectiveness of the ACs are likely to have deficiencies in their construct validity. AC members' collective characteristics are likely to be constructed from several behavioural factors.

Table 4 (Continued): Annotated Literature Review on AC Ensuring the Independence of the External Auditors

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Zaman, M., Hudaib, M., & Haniffa, R. (2011)	Extend prior research on the relationship between governance quality and auditor remuneration. Examine the influence of AC effectiveness, a proxy for governance quality on audit fees and non-audit services fees using a new composite measure comprising AC independence, expertise, diligence and size.	The population of the study is the UK FTSE-350 which represents a good mix of large and relatively small UK companies during the period 2001-2004. The final consists of non-financial UK FTSE-350 companies with a total number of 540 company year observations.	Use a number of ordinary least squares regression models to help to explore further the various relationship between AC effectiveness and audit fees and non-audit fees while controlling for other variables.	Find that after controlling for board of director characteristics, there is a significant positive association between AC effectiveness and audit fees only for larger clients. Indicate that effective ACs undertake more monitoring which results in wider audit scope and higher audit fees. Find the association between AC effectiveness and non-audit fees to be positive and significant, especially for larger clients. Findings supported regulatory initiatives aimed at improving corporate governance quality.	Use only four factors in the composite measure of AC effectiveness in different regulatory and institutional contexts. Use dichotomous measure of financial expertise, coded 1 if at least one member in the AC has financial expertise, and 0 other wise. The definition of financial expertise is perhaps too broad and encompasses skills that may not necessarily contribute to AC effectiveness.

2.8 Governance-related Agency Costs and their Value Relevance to Shareholders

2.8.1 Introduction

Separation of ownership and control between the principal (shareholders) and the agent (managers) gives rise to agency theory (Jensen and Meckling, 1976). Managers have the incentives to act in their own best interests by supplying biased financial information which does not reflect the true value of the company to the shareholders. Thus, from a financial reporting perspective, a desirable consequence of corporate governance is hypothesised to be the provision of high quality accounting information to financial statement user groups (Habib and Azim, 2008). An AC is in a good position to perform a monitoring function for the shareholders (Goddard and Masters, 2001).

The sub-sections below present and assess literature that has examined the relationship between governance-related agency costs and their value relevance to shareholders and a summary table of annotated literature review is also presented.

2.8.2 Extant Studies

Bushman and Smith (2001) reviewed and proposed additional research concerning the role of publicly reported financial accounting information in the governance processes of corporations. The authors argued that future research on the relationship between governance use and capital market use of financial accounting information is important for developing a more complete understanding of the effect of financial accounting information on economic performance. While governance research typically focuses on a particular governance mechanism in isolation, more complete understanding requires an explicit recognition of the interactions across governance mechanisms (Bushman and Smith, 2001).

On the other hand, Davis-Friday et al. (2006) examined the impact of the economic environment on the value relevance of earnings and book value in four Asian countries; Indonesia, South Korea, Malaysia and Thailand, in the period surrounding the Asian financial crisis from 1996-1997. The authors also examined the effects of corporate governance mechanisms on the value relevance of accounting numbers. Using a sample of 1035 firms across two years, the results of the study indicated that value relevance of earnings in Indonesia and Thailand are significantly reduced during the Asian financial crisis while value

relevance of book value increased. In Malaysia, the value relevance of both earnings and book value did not decrease during the crisis while in Korea, neither book value nor are earnings significantly impacted by the crisis.

Jamaluddin et al. (2009) extended the analysis of Davis-Friday et al. (2006) by examining the value relevance of equity book value and earnings, in a setting where the country experienced corporate governance reform (during and after the issuance of the Malaysian Code on Corporate Governance). The sample consisted of Main Board companies listed on Bursa Malaysia from 1999 to 2001. The authors found that Malaysian companies' equity book value and earnings are of value relevance in determining the firm's share price. However, the regulatory change experienced by the county to enhance the level of corporate governance in response to the financial crisis in 1997 does not have an impact on the valuation of equity book value and accounting earnings.

Another corporate governance and value relevance study is conducted by Habib and Azim (2008). The authors examined the relationship between accounting numbers and share price as the measure of accounting information quality and also consider the impact of ASX Corporate Governance Best Practice Code on the changes in the value relevance of accounting information in Australia. This study uses board, AC and external audit related variables to proxy for corporate governance. Similar to Davis-Friday et al. (2006), the regression results showed that firms with strong governance structure exhibit higher value relevance of accounting information. Results further showed that firm-specific economic variables are important variables of the value relevance of accounting information.

2.8.3 Comparative Assessment

Based on the outlines of studies above, the findings of Davis-Friday et al. (2006), Habib and Azim (2008), and Jamaluddin et al. (2009) indicated that corporate governance structure has an impact on the value relevance to shareholders. Good corporate governance structure creates value by providing value relevance information to the shareholders. The issues of corporate governance have been debated extensively for it is believed that a sound corporate governance system is indispensable in protecting the quality of accounting information produced by companies (Machuga and Teitel, 2009). Past studies have examined the agency theory and corporate governance as a monitoring mechanism (Bonazzi and Islam, 2007; Dey,

2008; Miller, 2009; Safieddine, 2009) but to date no studies have tested the relationship between the audit-related agency monitoring costs (external audit fees, internal audit budget and AC fees) and total shareholders return. In order to fill the research gap, this study aims to examine this relationship.

2.8.4 Tabulated Annotations

The annotated literature review on governance-related agency costs and the value relevance of these costs to shareholders is presented in Table 5.

Table 5: Annotated Literature Review on Governance-related Agency Costs and their Value Relevance to Shareholders

Author(s) (Year)	Discussions
Bushman, R.M., & Smith, A.J. (2001)	Review and propose additional research concerning the role of publicly reported financial accounting information in the governance processes of corporations. Discuss research on the use of financial accounting in managerial incentive plans and explore future research directions. Propose that governance research be extended to explore more comprehensively the use of financial accounting information in additional corporate control mechanisms, and suggest opportunities for expanding such research. Propose cross-country research to investigate more directly the effect of financial accounting information on economic performance through its role in governance and more generally.

Table 5 (Continued): Annotated Literature Review on Governance-related Agency Costs and their Value to Shareholders

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Davis-Friday, P., Eng, L.L., & Liu, C. (2006)	Examine the value relevance of earnings and book value in four Asian countries, Indonesia, South Korea, Malaysia and Thailand, in period surrounding the Asian financial crisis Examine the impact of the economic environment on the value relevance of book value and earnings. Examine the effects of corporate-governance mechanisms and the type of accounting system together with economic environment on the value relevance of accounting numbers.	Sample consists of firms from Indonesia, Korea, Malaysia and Thailand for which all required data are available. Market value of equity, book value of equity and net income data are obtained from Datastream Research Services. The sample period is 1996 and 1997 and consisted of 1035 firms (across two years): 158 from Indonesia, 217 from Korea, 271 from Malaysia and 389 from Thailand.	The market value of equity is regressed on book value of equity and net income. Model 1 includes an indicator variable to examine the effect of the economic environment (the effect of the crisis) on the valuation of earnings and book value. Model 2 tests market value of equity on book value of equity and net income, controlling for the effects of negative book value and negative net income. Model 3 investigates whether the use of IAS had any impact on the value relevance of earnings and book value.	The value relevance of earnings in Indonesia and Thailand is significantly reduced during the Asian financial crisis while the value relevance of book value increased. In Malaysia, the value relevance of both earnings and book value decreased during the crisis. In Korea, neither book value nor earnings is significantly impacted by the crisis. Results also indicate that the level of corporate governance mechanisms has impact on the extent of changes in the value relevance of book values, but not earnings.	

Table 5 (Continued): Annotated Literature Review on Governance-related Agency Costs and their Value to Shareholders

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Jamaluddin, A., Mastuki, N., & Ahmad, A. E. (2009)	Examine the effect of corporate governance reform on the value relevance of equity book value and earnings by employing the Ohlson's Valuation model.	Sample consists of Main Board companies listed on Bursa Malaysia from 1999 to 2001 in order to investigate the effect during and after the issuance of the Malaysian Code on Corporate Governance (MCCG) as a measure of corporate governance reform.	Examines the value relevance of equity book value and earnings, this study will be based on Ohlson's valuation model which relates market value as a function of book value and earnings.	Equity book value and earnings are value relevant in assisting investors to value firms' equity. The regulatory change experience by the country did not have an impact on the valuation of equity book value and earnings. This suggests that most of the Malaysia companies may not have met the intended purpose of MCCG, but merely conformed to the minimum requirement.	The study only examines the effect during and following the issuance of the code, covering only a three-year period (1999-2001). Future research: (1) Extend the period of the study to cover longer and more recent periods (2) A comparison between Malaysian and other emerging capital market may also contribute to the scarcity of research done in emerging markets.

Table 5 (Continued): Annotated Literature Review on Governance-related Agency Costs and their Value to Shareholders

Author(s) (Year)	Purpose/ Objective	Sample & Data Collection	Methods	Main Findings	Limitations & Future Research
Habib, A., & Azim, I. (2008)	Seek to examine the relationship between corporate governance and the value relevance of accounting information.	Use data from Australia's top 500 listed companies for the period 2001-2003. Final sample consists of 1289 firm-year observations from 2001 to 2003 with 430, 426 and 433 firms, respectively. Financial statement data and corporate governance information came from the Aspect Financial Analysis and Connect 4 databases, respectively.	Use board, AC and external audit related variables to proxy for corporate governance. Value-relevance is measured by the adjusted R^2 derived from a regression of stock price on earnings and equity book values following Ohlson's accounting-based valuation framework.	Regression results show that firm with strong governance structure exhibit higher value-relevance of accounting information. Results further show that firm-specific economic variables are important determinants of the value-relevance of accounting information.	Significant regulatory reforms regarding corporate governance around the world give an impression that regulators believe that governance plays a key role in ensuring, among others, credible financial reporting.

CHAPTER 3. THEORETICAL FOUNDATION AND HYPOTHESES DEVELOPMENT

3.1 Introduction

This chapter describes the theoretical foundation of the study and develops the sets of hypotheses that will be tested. The theoretical foundation is first discussed. The behavioural assumption underlying this study is that humans are economically rational and act in their own self-interest. This underlies agency theory and provides the rationale for the extent to which monitoring costs are incurred to monitor the behaviour and performance of top management. Next the hypotheses are formulated. There are 5 sets of hypotheses to be tested in this study.

3.2 Theoretical Foundation

3.2.1 Agency Theory and AC

Agency theory is the most common theoretical foundation in explaining corporate governance and its reforms. Agency theory provides particularly useful guidance in understanding the role of an AC which will be the focal point of this study. Berle and Means (1932) first emphasized the concept of separation of ownership and control stating that as the ownership of corporate wealth has become more widely dispersed, ownership of that wealth and control over it have come to lie less and less in the same hands. Jensen and Meckling (1976) is the first study to place this ownership issue into a proper theoretical framework and model the agency relationship.

According to Jensen and Meckling (1976), an agency relationship can be defined as a contract under which one or more persons (the principal) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. In the context of a company, the shareholders (principal) appoint the managers (agent) to carry out day-to-day business decision making on their behalf. Managers might have personal goals that compete with the principal's goal of maximising wealth. Since the shareholders authorise managers to take charge and control of the firm's economic resources, a potential conflict of interest exists between these two groups. Importantly, agency theory suggests that, in imperfect labour and capital markets, managers will seek to

maximize their own utility at the expense of shareholders due to information asymmetry and moral hazard (Kleiman, 2010). Managers may excessively consume firm resources and make decisions that are not in the shareholders' best interests.

Subsequent development in agency theory has been proposed by Fama and Jensen (1983). Similar to Jensen and Meckling (1976), Fama and Jensen (1983) also argued that the contract structure of organisations which involves separating ownership from control, gives rise to agency problems resulting from the fact that the agents (managers) do not want to bear the risks. Furthermore, the development of the agency theory has resulted in the proposition and implementation of governance structures. The strengthening of corporate governance (i.e., board of directors, ACs, external auditors and internal audit function) can reduce this agency problem. Without effective control procedures, managers are more likely to take actions that deviate from the interest of the shareholders (Psaros, 2009). An overview of key features of agency theory is given in Table 6.

The concept of agency theory where managers will seek to act in their own best interest instead of the shareholders gives rise to three agency theory problems. The first problem relates to the potential for managers to maximize their own utility at the expense of shareholders. This can be manifest in excessive remuneration, bonuses, golden parachute and other unfair benefits provided to the managers by the company. The second problem of agency theory relates to the managers' preference to focus on short term performance to meet their company's profit target. This will eventually lead to a short fall of longer term goals and hence decreases the shareholders' value. Longer term goals achieved by managers are arguable more beneficial to shareholders. The last problem of agency theory is the differences between managers' and shareholders' attitude towards risk. Managers prefer to take riskier investments compared to shareholders as managers are more likely to be rewarded for success than failure (Psaros, 2009).

Table 6: Agency Theory Overview

Key idea	Principal-agent relationships should reflect efficient organisation of information and risk-bearing costs.
Unit of analysis	Contract between principal and agent.
Human assumptions	Self-interest. Bounded rationality. Risk aversion.
Organisational assumptions	Partial goal conflict among participants. Efficiency as the effectiveness criterion. Information asymmetry between principal and agent.
Information assumption	Information as a purchasable commodity.
Contracting problems	Agency (moral hazard and adverse selection) Risk sharing.
Problem domain	Relationships in which the principal and agent have partly differing goals and risk preferences (e.g., compensation, regulation, leadership, impression management, whistle-blowing, vertical integration, transfer pricing).

Source: Clarke (2004)

In order to deal with shareholder-manager agency conflicts, shareholders could monitor every managerial action to make sure that managers perform according to their written contract. The primary means of monitoring is via the annual financial statements whose reliability is enhanced by an audit report. However, financial statements may be inadequate for monitoring purposes due to information asymmetry and incomplete information (Goddard and Masters, 2001). The financial statements are prepared by managers who know more about the current condition and future prospects of the firm than shareholders or auditors. To exploit their information advantage at the expense of outsiders, managers are reluctant to disclose any private matters for fear that it may be used against them. Shareholders' monitoring using financial statements could be extremely costly and inefficient.

Conversely, to reduce shareholders-managers agency conflicts, there is a role for an intermediary between the managers, auditors and shareholders. According to Fama and Jensen (1983), non-executive directors can act as arbiters in disagreements among internal managers and carry out tasks that involve serious agency problems between managers and shareholders. An AC that consists of independent non-executive directors, without a day-to-day responsibility, is in a good position to perform a monitoring function for the shareholders (Goddard and Masters, 2001).

Also, ACs are commonly viewed as monitoring mechanisms that enhance the financial reporting (Blue Ribbon Committee, 1999). The ASX CGC (2007) states that ACs are responsible for reviewing the entity's financial statements before submission to the board of directors, ensuring the independence and competence of the internal and external auditors, overseeing the company's internal controls and many more. Thus, the extensive roles and responsibilities of an AC will protect the interest of the shareholders and reduce the shareholders-managers agency conflicts. As a result, the demand for active, independent, expert audit committees to strengthen the quality of auditing and to reinforce the task of monitoring in general is likely to increase under pressure from outside shareholders (Garcia-Sanchez et al., 2012).

Past studies have examined the agency theory and corporate governance as a monitoring mechanism (Bonazzi and Islam, 2007; Dey, 2008; Miller, 2009; Safieddine, 2009). Since 2000, where many high profile companies collapsed in Australia, there have been an increasing number of studies focusing on corporate governance. The importance of sound corporate governance also increased due to regulatory reforms (SOX Act 2002 in the United States, Combined Code on Corporate Governance 2003 in the United Kingdom and ASX CGC 2003 & 2007 in Australia). Therefore, the establishment of an AC in a company is a fundamental component of a good corporate governance structure.

Based on the principal-agent theoretical perspective, this study will investigate how effective and relevant is the use of an AC (part of the corporate governance component) as a monitoring mechanism to reduce agency conflict between the managers (agent) and the shareholders (principal). The responsibilities of an AC facilitating the quality of external audit, ensuring the independence of external auditors, overseeing the quality of the internal

audit function and ensuring the independence of internal auditors can align the interest of the shareholders with the interest of the managers. The interaction between the AC, external auditors and internal auditors also helps to achieve maximum value for the company and its shareholders.

3.3 Hypotheses Development

3.3.1 AC Overseeing the Quality of the Internal Audit Function

The main role of an AC is to oversee the quality of financial reporting and corporate accountability. Alternatively, the internal audit function plays a crucial role in preventing fraud and errors and ensuring effective controls. Hence, the objectives of the internal audit function and the AC are closely related with one another. An efficient AC can be helpful to the internal audit function in performing its duties. To maintain good corporate governance, communication and a good working relationship between the staff responsible for the internal audit function and the AC are important (Scarbrough et al., 1998, IIA 2002a, 2002b, 2003b).

Thus, this study first aims to explore whether the effectiveness of AC roles based on AC's governance characteristics are associated to financial resources and labour hours devoted to the internal audit function. Independent AC members and AC chair are more likely to be concerned with issues related to internal audit processes such as being involved in the decision to dismiss the CIA, and the frequency and length of meetings with the internal audit function (Goodwin, 2003). In addition, AC members equipped with financial or industry expertise are more likely to have a better understanding of the complex technical and design aspects of internal controls related to the particular company. DeZoort (1997) found that AC members with financial experience make judgements more similar to auditors than those AC members without such experience.

A larger AC size with number of members that have a more diverse set of skills and knowledge would exercise a greater degree of expertise in monitoring the internal audit function. Another consideration is the frequency of meetings. By meeting more frequently, members would remain informed, alert and diligent about auditing issues (Scarbrough et al., 1998). On the other hand, an AC charter is also important as it clearly sets out the AC's roles and responsibilities, giving a stronger sense of authority to the AC. Kalbers and Fogarty

(1993) argued that the existence of a clear AC charter provides power for authoritative decision making and thus, the AC can achieve its oversight role more effectively.

Earlier studies have explored the relationship between the internal audit function and the AC (Scarborough et al., 1998; Raghunandan et al., 1998; Raghunandan et al., 2001; Goodwin, 2003; Abbott et al., 2010). Scarborough et al.'s (1998) study found that effective ACs (i.e., independent, diligent and capable members) are associated with an objective and independent internal audit function. Likewise, Raghunandan et al. (1998) demonstrated that ACs which have granted private access to the CIA and have reviewed both the plans and the results of internal auditing are more likely to be perceived as knowledgeable by their CIAs.

In a later study, Raghunandan et al. (2001) argued that ACs comprised solely of independent directors and with at least one member having an accounting or finance background are more likely to have longer meetings with the CIA and review internal audit proposals. Furthermore, using data from Australia and New Zealand, Goodwin (2003) found that independence and accounting experience have a complementary impact on AC relations with the internal audit function. Moreover in the United States, Abbott et al. (2010) documented a strong, positive association between AC oversight variable and the amount of internal audit function budget allocated to internal controls-based activities.

The findings of past studies suggest that characteristics of ACs are associated with aspects of the internal audit function. An effective AC should ensure that adequate financial resources and hours are devoted to internal control based activities. Also an AC should ensure that the CIA has private access to the chair or other members of the AC and is able to discuss concerns on resourcing needs of the internal audit function. Hence, the following hypotheses are formulated:

Hypothesis One (a): The AC's mechanisms for role effectiveness, based on its AC's governance characteristics (i.e., chair independence, financial and industry expertise, size, frequency of meetings and charter) are positively related to financial resources devoted to the internal audit function.

Hypothesis One (b): The AC's mechanisms for role effectiveness, based on its AC's governance characteristics are positively related to labour hours devoted to the internal audit function.

3.3.2 AC Ensuring the Independence of the Internal Audit Function

In more recent years, the independence of the internal audit function has gained a lot of interest among the Institute of Internal Auditors (IIA), academics and practitioners. The motivation for this growth in research relates to the potential conflicts arising from the expanding role of the internal audit function as both a key corporate governance mechanism and an internal consultancy service (Stewart and Subramaniam, 2010). It can be argued that, internal auditors providing both assurances to external stakeholders and consulting services to management may cause a conflict of interest and threaten the internal auditors' independence.

Firms have established an AC to monitor corporate governance matters, risk management and assurance issues. Hence, the AC serves as an oversight role in ensuring the independence of the internal audit function. An effective AC with good governance characteristics can strengthen the independence position of the internal audit function (Verschoor, 1992). Empirically, Goodwin and Yeo (2001) argued that the relationship between internal audit function and AC may affect organisational independence while the use of the function as a management training ground may affect individual objectivity.

Moreover, in Australia, Christopher et al. (2009) identified a number of threats to the internal audit function's independence. These include having the management to approve the internal audit budget and being involved in the audit plan, the internal audit function not reporting functionally to the AC, the AC not having sole responsibility for appointing and dismissing the CIA and a lack of AC accounting expertise. McHugh and Raghunandan (1994) also found that a large majority of internal auditors indicated that vesting hiring or firing authority with the AC would enhance the independence of the internal audit function and improve the ability of internal auditors to generate action on audit findings.

Thus, based on the argument above, the AC is an important vehicle in increasing the company's status and the independence of internal audit function. AC 'good governance'

characteristics are more likely to ensure the independence of the internal audit function. The following hypotheses from the literature are articulated:

Hypothesis Two (a): The AC's mechanisms for role effectiveness, based on AC's governance characteristics are positively related to the independence of the internal audit function.

Hypothesis Two (b): The AC's mechanisms for role effectiveness, based on AC's governance characteristics are positively related to the extent of AC support for internal audit function independence.

3.3.3 AC Facilitating the Quality of the External Audit

Studies relating to AC and external audit fees have been published in recent years. To date, existing evidence from these previous studies is mixed. Most studies show that the quality of AC characteristics is positively related to the level of audit fees (Carcello et al., 2002; Abbott et al., 2003; Goodwin and Kent, 2006; Yatim et al., 2006; Hoitash and Hoitash, 2009; Singh and Newby, 2010), but some have found no significant association (Goddard and Masters, 2001; Rainsbury et al., 2009).

A number of studies have investigated the association of AC independence with financial reporting and audit fees. ACs comprised of independent members are less likely to experience earnings restatements as they are more effective in monitoring the corporate financial accounting process (Beasley et al., 2000; Carcello and Neal, 2000; Klein, 2002; Abbott et al., 2004). This implies that an AC independent from the management is more likely to question and dispute management on various issues and, therefore, is better at protecting the reliability of the accounting process. Independent ACs will also ensure that the audit hours are not reduced to a level where the quality of audit would be compromised.

Moreover, in order to reduce financial misstatements, independent ACs may also demand additional work (beyond the initial audit plan) to be performed by the external auditors. Supporting the arguments above, Carcello et al. (2002) and Abbott et al. (2003) found that AC independence is positively related to external audit fees. Independent ACs will demand a greater level of audit assurance and potentially provide stronger support for external auditors

during scope negotiations with management (Abbott et al., 2003). Thus, this tends to improve the quality of external audit and leads to higher audit fees.

On the other hand, the effectiveness of an AC in facilitating the quality of external audit is further enhanced if the members have relevant expertise. ACs equipped with financial and industry expertises are better at understanding complex external auditing risk assessment tests and procedures proposed. Furthermore, financial experts on the AC can provide additional support for external auditors when discussing or negotiating auditing issues with management (Abbott et al., 2003). Evidence from previous studies suggests that AC financial expertise is positively related to audit fees (Carcello et al., 2002; Abbott et al., 2003; Hoitash and Hoitash, 2009). AC members that possess financial and industry expertise seek to purchase higher audit quality in order to protect their reputation and also protect the interest of shareholders. Following the ASX CGC's recommendation, this study will examine two measures of expertise: accounting expertise and industry expertise. Consistent with previous studies, a high proportion of financial and industry experts on the AC will be positively related to audit fees.

Previous studies have also shown that the frequency of AC meetings is a good measure of AC effectiveness. In regards to external audit fees, Carcello et al. (2002) found no significance between AC meetings and audit fees, while Abbott et al. (2003), Goodwin and Kent (2006) and Hoitash and Hoitash (2009) observed a positive significant association. AC that meets frequently with the auditors and management are more likely to be informed about the auditing issues and can prevent the occurrence of financial reporting problems. Higher frequency of AC meetings can proactively and positively influence the audit coverage during various stages of the audit (Abbott et al., 2003). Thus, the frequency of AC meetings will be positively associated with higher audit fees.

On the other hand, AC size and charter are important characteristics to the overall effectiveness and strength of AC. Larger AC tends to have more authority (Kalbers and Fogarty, 1993) which is found to increase financial reporting quality (Felo et al., 2003), reduce the incidence of earnings restatements (Lin et al., 2003) and have a committee with a more effective monitoring function (Dalton et al., 1998). Hence, AC size is likely to be associated with higher external audit fees that facilitate better quality service. Furthermore,

the responsibilities of an AC are clearly defined and explained in its charter. Kalbers and Fogarty (1993) argued that the existence of a clear AC charter provides power for authoritative decision making. Thus, the AC can achieve its oversight role more effectively by successfully obtaining a good external audit function as reflected in their ability to get board approval for higher external audit fees. The presence of an AC charter will be positively related to audit fees. The following hypothesis drawn from the above studies is formulated:

Hypotheses Three: The AC's mechanisms for role effectiveness based on AC's governance characteristics are positively related to external audit fees (a proxy for the quality of the external audit).

3.3.4 AC Ensuring the Independence of the External Auditors

The external auditors when acting as an independent party with knowledge of the company's financial affairs can provide the AC with valuable, objective insight into aspects of the company's governance and internal controls, including its risk management. The AC in turn aids the effectiveness of the external auditors (AUASB, AICD and IIA, 2008). Hence, one of the key roles of the AC is to ensure the independence of the external auditors and observe the extent of non-audit services provide by the auditor to the management.

Given an active and independent AC's concern for perceived external auditor's independence, an AC can influence the non-audit services purchase decision (Abbott et al., 2003). The results of previous studies (DeAngelo, 1981; Prakash and Venable, 1993; Firth, 1997) showed that non-audit service fees can threaten the independence of external auditors. So far, only four studies examined the relationship between AC characteristics and non-audit service fees purchases (Abbott et al., 2003; Hoitash and Hoitash, 2009; Lary and Taylor, 2011; Zaman et al., 2011).

Abbott et al. (2003) found that ACs comprised solely of independent directors and meet at least four times annually, are significantly and negatively associated with the non-audit service fees ratio. Moreover, in the post-SOX period, Hoitash and Hoitash (2009) also found that strong ACs might choose to authorize less non-audit services, possibly in order to contribute to the perception of auditor's independence. Two more recent studies, Lary and

Taylor (2011) found that some AC characteristics are negatively and significantly associated with non-audit fees while Zaman et al. (2011) found that AC characteristics are positively and significantly associated with non-audit fees in larger companies. This prior literature suggests that an effective AC is more likely to reduce the level of non-audit service fees provided by the external auditor to the management. Hence, the following hypothesis is formulated:

Hypotheses Four: The AC's mechanisms for role effectiveness based on AC's governance characteristics are negatively related to non-audit fees (a proxy for the independence of the external auditors).

3.3.5 Audit-related Agency Monitoring Costs and Total Shareholders Return

Separation of ownership and control (the agency problem) between the managers (agent) and the shareholders (principal) provide incentives for managers to act in their own best interest and maximise their personal wealth. This can lead to managers providing biased accounting and financial information to shareholders. Hence, the strengthening of the audit-related corporate governance structures and mechanisms (i.e., AC, external auditors and internal audit function) can mitigate this problem. In an organisation, an AC is an important component of board governance.

Habib and Azim (2008) argued that from a financial perspective, a desirable consequence espoused for corporate governance is the provision of high quality accounting information to financial statement user groups. Strong AC's governance characteristics help to align the interest of the managers with the interest of shareholders by reducing manger's opportunistic earnings management practices and providing reliable financial information. Furthermore, Goodwin and Seow (2002) also argued that sound corporate governance is important because it can affect the quality of financial reporting and thus, leads to increased investor confidence especially in an emerging capital market.

Based on the agency theory framework, owners would rationally incur higher agency monitoring costs in order to gain greater returns due to the restricting of management's behaviour associated with adverse selection and moral hazard. In particular, adverse selection of financial information by management to report to, or withhold from shareholders, is

expected to be reduced when higher audit-related monitoring costs are incurred. Therefore, this study will investigate whether the resourcing of audit-related governance structures and mechanisms (i.e., incurring higher agency monitoring costs) is positively related to the company's returns to shareholders. In this respect, no prior auditing studies have tested the relationship between audit-related governance costs (i.e., external audit fees, internal audit function budget and AC fees) and total shareholders return. The following hypothesis is developed:

Hypothesis Five: Audit-related agency monitoring costs (external audit fees, internal audit function budget and AC fees) are positively related to shareholders return.

CHAPTER 4. RESEARCH METHODS

4.1 Introduction

Mixed methods are used to gather both primary and secondary data. There are two stages of data collection employed in this study: the primary data collection stage involving the administration of a questionnaire and the secondary data collection stage involving extraction from annual reports and financial databases. This chapter addresses the following areas: (1) justification of choice of selection of companies; (2) justification of the financial year selected; (3) questionnaire data collection stage; and (4) secondary data collection stage. Both data collection stages are discussed in detail in separate sections.

4.2 Selection of Sample of Companies

The sample of companies for both primary and secondary data collection is chosen as a census of all top 300 listed companies on the ASX with financial year ending in 2010. A constituent list of top 300 listed companies is obtained from the Standard and Poor's (S&P) website. These companies are selected because top 300 listed companies on the ASX include large capitalisation, mid capitalisation and small capitalisation components of the S&P/ASX index family. Moreover, top 300 listed companies also cover approximately 81% of Australian equity market capitalisation (ASX, 2010).

Companies are then excluded from the sample for the following reasons:

a) Missing or no data and other relevant information available on the Aspect Huntley FinAnalysis database and the Morningstar DatAnalysis database (i.e., annual reports, financial statements, AC variables, board of director variables and information regarding the CEO and CFO).
b) Companies with no internal audit function.
c) Foreign companies listed on the ASX.
d) Incomplete or no company addresses provided.

This resulted in a final sample of 255 listed companies with financial year ending in 2010 as shown in Appendix A.

4.3 Selection of Financial Year

Company data for financial year ending in 2010 is selected for the following reasons. The ASX Listing Rule requires companies listed on the S&P/ASX All Ordinaries index to have an AC from 1 January 2003 onwards. This rule also requires the top 300 listed companies to comply with the recommendations of the ASX CGC's *Principles and Recommendations* (Recommendation 4.1, 4.2, 4.3 and 4.4) on the composition, operation and responsibility of the AC (AUASB, AICD and IIA, 2008).

Moreover, in terms of the Australian economy and the share market, 2010 is a relatively normal year. The share market had recovered from the global financial crisis and company earnings announcements were improved on the downturn of 2008 and 2009. According to the Australian Industry Group's (AIG) 2010 economic report, the economic recovery in Australia has gained momentum, underpinned by significant increases in commodity prices, stronger corporate profitability, strengthening labour market conditions and higher wage growth.

Also, recent regulatory changes (ASX CGC, 2007) relating to ACs have lent themself to the research in this study. In year 2007, ASX CGC released *Corporate Governance Principles and Recommendations* which is a revised version of the original 2003 publication. The revisions included some amendments to details on the roles and responsibilities of ACs. Companies are expected make changes in an orderly way so as to meet these amendments over a reasonable period. Hence, 2010 is an appropriate year to use in this study as it best captures the gradual strengthening of corporate governance since 2007, especially in ACs.

4.4 Questionnaire Data Collection Stage

This section discusses the methods used in the first stage of data collection. A questionnaire is developed and administered to the Chief Internal Auditor (CIA) of the sampled companies. The purpose is to investigate hypothesis one and two of this study by combining primary data with secondary data collected in the second stage.

The information sought from the CIA in the questionnaire is divided into four sections. Section one relates to the background of both the CIA and the company. Section two asks respondents about the internal audit function activities while section three seeks data on the

relationship between the AC and the internal audit function. The fourth section of the questionnaire asks respondents about the independence of the internal audit function.

Apart from presenting the questionnaire instrument, the issues concerning construction and administration of the instrument are discussed throughout this section. These issues are: (1) justification of the respondents selected; (2) construction and rationale for the research instrument used to collect the data; (3) approval required prior to using the research instrument; (4) and the approaches taken in administration of the questionnaire; and (5) the sample response rate.

4.4.1 Selection of Respondents

The data is collected by mailing a questionnaire to CIA of sampled top 300 ASX listed companies. This method is considered appropriate because the CIA is likely to be knowledgeable about the company's internal audit function and the operations of the AC (Goodwin and Yeo, 2001). The information sought in the questionnaire is not available through secondary data sources. Moreover, using a questionnaire enables comparisons to be made with previous studies (Scarbrough et al., 1998; Goodwin, 2003; Ahmad and Taylor, 2009; Abbott et al., 2010) that applied the same research method.

4.4.2 Research Instrument

The questionnaire of this study focuses mainly on the internal audit function and the AC. It consists of 22 questions, organised into four sections. Section One: Background, Section Two: Internal Audit Function Activities, Section Three: AC and the Internal Audit Function and Section Four: Internal Audit Function Independence (See Appendix D). Information collected from question 8, question 9, question 10, question 18 and question 21 is used to test hypotheses one and two of this study. Whereas, information collected from the rest of the questionnaire is used in comparative case study analysis. The nature and approach to the comparative case study methods is discussed in detail in Chapter 6, Section 6.2.

Prior to completing the final version of the questionnaire, the formatting of the questionnaire is subjected to pretesting to ensure question comprehensiveness, relevancy, appropriateness and efficiency. It is pre-tested on four RMIT University academics with familiarity in

auditing and corporate governance research experience. The questionnaire is also presented to the manager of research and publishing at the Institute of Internal Auditors (IIA) Australia for review and approval before its distribution to IIA members for pilot testing. Amendments are made after receiving constructive feedback from both parties. The comments received are shown in the discussion parts of each of the four sections of the questionnaire, and again under the administration of the questionnaire.

4.4.3 Questionnaire Design

The questionnaire in this study is created and formatted according to Dillman's (2000) scientific basis for survey research methodology such as the development of question scales and multiple choice answers, confidentiality requirements, minimisation of question bias and the use of unambiguous wording. Dillman (2000) is regarded as a leader in establishing a paper-based questionnaire. If respondent finds the questionnaire easy to read and follow, the response rate will improve. Moreover, a well formatted questionnaire will also reduce measurement error as the respondent will be more likely not to misread or overlook questions.

In designing the questionnaire, a number of important factors are considered. Firstly, the CIA is an extremely busy person and difficult to gain access to. Therefore, the questionnaire should not be too long. Second, the questionnaire should not be too complicated and should not take more than 10 to 15 minutes to complete. This suggests that the questions created require the respondents to tick an answer as an alternative for written answers. Third, information required on the internal audit function is not publicly available and is regarded as a sensitive issue for a company. Annual reports do not provide information about an organisation's internal audit function. Fourth, CIA is likely to be secretive about disclosing information concerning their organisation. Hence, personal information on the CIA will remain anonymous in this study. In summary, all of these issues are adhered to in the final questionnaire and cover letter.

4.4.4 Questionnaire Cover Letter

The questionnaire cover is a short single page letter explaining the purpose and the content of the research project. The cover letter also gives details to the respondents about the benefits of participating in the research project and a statement that personal details will be treated in

confidence. Further, the letter describes the instructions and options on how to complete the questionnaire, the approximate time to complete the questionnaire and instructions to return the questionnaire in the postage-paid envelope provided. The cover letter is signed by both the researcher and the thesis senior supervisor. The letter concludes with a paragraph stating that the research project is vetted and approved by the RMIT University's Business College Human Ethics Committee. It directs respondents with questions about the manner in which the questionnaire is being managed to contact the thesis senior supervisor. A sample of the questionnaire cover letter is shown in Appendix C.

4.4.5 Questionnaire Contents

4.4.5.1 Section One: Background

In terms of rationale, section one of the questionnaire is designed to identify the background of the respondents (CIAs) and the profile of the company. These questions are common questions used by most studies and are adapted from Scarbrough et al. (1998), Goodwin (2003) and Abbott et al. (2010). Respondents' background in this questionnaire provides basic demographic information about age, gender, years of working experience in the internal audit field and their current job position. This section also includes a series of questions related to the profile of the company including company name, company size based on market capitalisation, company industry, professional audit staff employed and total annual internal audit budget.

Information on the characteristics of the respondents and companies is deemed important in the interpretation of the questionnaire results. Analysis of the reported characteristics of the company profile and the respondents can indicate the quality of the information collected and whether or not it is a representative of the population. The questions in section one is numbered 1 to 9 in the questionnaire shown in Appendix D of the thesis. Feedback on the first draft of the questionnaire from the four RMIT University academics resulted in minor changes in the wording in a number of questions and reduction in the total number of questions.

4.4.5.2 Section Two: Internal Audit Function Activities

In terms of rationale, section two explores the manner in which the internal audit function in the company operates. These questions are revised based on the questionnaire used in Goodwin and Yeo (2001), Raghunandan et al. (2001), Goodwin (2003) and Abbott et al. (2010). The second section of the questionnaire asks a number of questions relating to total hours devoted to internal audit function, the approximate percentage distribution of internal audit function activities, the use of internal audit function as training ground and staff turnover, internal audit function reporting responsibility, termination rights and budgetary oversight. Also, section two asks about the coordination of internal audit function with the external auditors in respect to audit coverage and work scheduling and also whether external auditors have access to working paper and management reports of the internal audit function.

Information on the internal audit function activities is essential in interpreting the findings of this study. Data collected from question 10 will be used to test hypothesis one while the rest of the data gathered from question 11, 12, 13, 14 and 15 will be used in comparative case analysis. The questions in section two are numbered 10 to 15 in the questionnaire as shown in Appendix D of the thesis. There is a reduction in the number of questions in this section due to feedback from the four RMIT academic reviewers of the draft.

4.4.5.3 Section Three: AC and the Internal Audit Function

In terms of rationale, section three of the questionnaire is used to determine the relationship between the AC and the internal audit function of the company. The questions are designed and adapted according to Raghunandan et al. (1998), Scarbrough et al. (1998), Goodwin and Yeo (2001), Raghunandan et al. (2001) and Goodwin (2003). The third section collects data on the relationship between AC and internal audit function relating to AC meetings with the CIA (i.e., length, privacy and number of meetings), AC expertise in regards to internal control matters, AC reviewing of plans and receiving reports from the internal audit function.

These questions provides insight into the level of AC involvement relative to its role in the internal audit function and the information collected from the questionnaire will be used in comparative case analysis. The questions in section three are numbered 16 to 20 in the questionnaire as shown in Appendix D of the thesis. Feedback on the draft of this section of

the questionnaire from the four RMIT University academics resulted in changes in the wording in a number of questions.

4.4.5.4 Section Four: Internal Audit Function Independence

In terms of rationale, section four looks at the independence of the internal audit function. These questions are originally created based on the questionnaire used in Ahmad and Taylor's (2009) study. Taking a cognitive perspective of internal auditor independence, Ahmad and Taylor (2009) developed the questionnaire by drawing on measures established in the organisational behaviour literature and adapting these to the internal auditor's context. The exercise of independence by internal audit function is important given their modern roles and responsibilities. The questions constructed in section four will be used to test hypothesis two of the study.

The fourth section of the questionnaire asks respondents about the internal audit function independence in terms of: (a) the dedication of internal audit function to maintain independence; (b) whether internal audit function would resist any pressure and threat in order to maintain independence; (c) would the internal audit function comprise independence if they work under both audit role and advisory service role; (d) whether the AC provides a strong backing for the maintenance of internal audit function independence; (e) whether the independence of the internal audit function is strongly upheld because AC members have strong collective independence; and lastly (f) would AC be prepared to take action to maintain the independence of the internal audit function.

The questions in section four are numbered 21 in the questionnaire as shown in Appendix D of the thesis. Feedback on the draft of the questionnaire from the four RMIT University academics resulted in changes in the wording in a number of sub-questions.

4.4.6 Ethical Issues

The rules and regulations of RMIT University require that when human data is collected by questionnaire, whether it is for a research project or thesis, a formal ethics approval of the contents of the questionnaire must be obtained from the RMIT Human Research Ethics Committee. The required procedure for the application process is to complete the specified

forms and submit the application to the Secretary of Business College Human Ethics Advisory Network for assessment. Ethics approval for the study is approved by the Chair of the Business College Human Ethics Advisory Network and approval is granted for the period from 21 June 2011 to 1 March 2014. The letters of ethics approval received from the committee appears in Appendix B of the thesis.

4.4.7 Administration of the Questionnaire

The questionnaire is first administered online by using the template on the online questionnaire software package, Survey Monkey. After setting up the template, a survey link is generated and respondents could click on the link to complete the questionnaire online. In parallel, a hard copy of the questionnaire is also sent to the sampled subjects to complete. Thus, the respondents of this study are given two options, either to complete the questionnaire online or by mail.

The pilot test of the questionnaire is electronically sent by IIA Australia in an email together with a cover letter and an online questionnaire link. The research manager at IIA Australia arranged to forward the email to a limited number of IIA members who are CIAs in the top 300 ASX listed companies. This represented a sample size of 60. The questionnaire is first sent on 10 October 2011 by IIA. A total of 4 usable responses are received representing a response rate of 7%. No further responses and comments are received from the respondents.

Due to poor responses from the email sent by IIA to selected members who are CIAs of top 300 companies, the administration of the questionnaire is reviewed again. It is found that there is an online technical error in one of the questions where the respondents could not key in their answer. The error is corrected and a second and third pilot test is sent by IIA Australia to the same number of members on 20 October 2011 and 10 November 2011 respectively. A total of 9 usable responses are received, yielding a response rate of only 15%. The 9 responses are analysed, and no further revisions to the wording in the questionnaire are deemed necessary. Due to this continuing poor response rate, a different method of administration is chosen.

Rather than going through IIA Australia using an email approach, the questionnaire is administered directly from RMIT University through a copy of the printed questionnaire,

cover letter and postage-paid envelope that is sent to the Chief Financial Officers (CFOs) of top 300 ASX listed companies. The CFO is instructed to pass the enclosed questionnaire to the company's CIA for completion. After completing the questionnaire, the CIA is requested to return the questionnaire using the enclosed postage-paid envelope provided. The questionnaires are mailed out in two stages.

The first stage of the questionnaires is sent on 2 December 2011 and a reminder of the questionnaire is mailed on 6 February 2012. There are two major reasons for selection of the dates to send the questionnaire. First, by these dates the previous financial year's annual reports would have been completed and the CIA would most likely to be contactable and thus, would increase their willingness to complete the questionnaire sent to them. Second, the periods are before and after Christmas and summer holidays, so the CIA is likely to be available. A record is kept to track the number of questionnaires sent and recovered during the initial and reminder periods.

4.4.8 Sample Response Rate

The questionnaires are mailed out in two stages. A total of 255 questionnaires are initially mailed on 2 December 2011. A total of 23 usable responses are received, yielding a response rate of 9%. A follow-up mailing is conducted on 6 February 2012 and produced an addition of 13 usable responses. A total of 27 unusable responses consisted of 5 companies without internal audit function, 3 CIAs stating they are not interested to take part in the research project, 13 companies that outsourced their internal audit function and 6 questionnaires that are returned to sender. This led to the final sample size of 36 respondents, representing a response rate of 14%. Compared to other studies' response rates, using a questionnaire of a similar nature targeting the CIA [Carcello et al., 2005 (25%); Pararit et al., 2012 (18%); Christopher et al., 2009 (17%); Abbott et al., 2010 (13%)], the response rate for this study is deemed fairly reasonable and may present a fair reflection of the views of the CIA.

A non-response bias test is performed to compare the responses of those who returned the first mailing of the questionnaire to those who returned the second mailing of the questionnaire. The 36 usable response are divided into two groups, based on those sent in the first stage of the mailed out on 2 December 2011 (23 responses) and those sent in the second stage of the mailed out on 6 February 2012 (13 responses). Results of a t-test indicated that

there are no statistically significant differences between the means of the test variables for the two groups ($p > 0.05$).

4.5 Secondary Data Collection Stage

This section discusses the methods used in the second stage of data collection. In this stage, secondary data (financial and non-financial) of top 300 ASX listed companies listed for the financial year ending in 2010 is hand collected from annual reports and financial databases. The purpose is to test all the hypotheses of this study by combining the secondary data collected at this stage with the questionnaire data collected at the first stage. The discussion in this section centres on the following areas: (1) the data sources utilised in data collection; (2) variable definition and measurement; (3) model specification; and (4) conceptual model.

4.5.1 Secondary Data Sources

Secondary data (financial and non-financial) are hand collected from the annual reports. Annual reports for the financial year ending in 2010 are downloaded for all sampled companies from the Connect 4 online database while various share market and other company data are extracted from the Aspect Huntley FinAnalysis and Morningstar DatAnalysis online databases. Non-financial data on the sampled companies' ACs are collected from the annual reports. AC chair independence and AC members' expertise and industry experience are gathered from the director's profile while AC meetings are obtained from the director's meeting section. AC size and charter are collected from the corporate governance section while the AC fees are obtained from the director's report in the annual reports.

Other data collected from annual reports are audit fees, non-audit fees and total shareholders return. Both audit fees and non-audit fees are obtained from the notes to the accounts of the financial statements. Calculated numbers for the total shareholders return, dividend per share, share price at the beginning of the period and share price at the end of the period are collected from the Aspect Huntley FinAnalysis database. Data on the characteristics of the company and external auditors are collected from the Aspect Huntley FinAnalysis database and modelled as control variables in this study (i.e., total assets, leverage, receivable ratio, inventory ratio, current ratio, operating cash flow, growth, mining, industry companies,

reported net loss, return on assets, debt ratio and big 4 auditors). Numbers of foreign subsidiaries and total subsidiaries of each sampled companies are obtained from the Morningstar DatAnalysis database while board of director's independence and frequency of meetings are gathered from the director's report in the annual reports.

4.5.2 Variable Definitions and Measurements

This study seeks to provide evidence on the effectiveness of ACs in fulfilling their roles. AC effectiveness is benchmarked against four main roles: 1) overseeing the quality of the internal audit function; 2) ensuring the independence of the internal audit function; 3) facilitating the quality of external audit; and 4) ensuring the independence of external auditors, To this end, seven regression models are developed. These models are detailed in section 4.6. The specific independent and dependant variables in this study that used questionnaire data and secondary data are defined and their measurement scales are described in turn.

4.5.2.1 Independent Variables

The independent variables applied are those describing the AC's governance characteristics. This selected set of independent variables investigates the relationships between AC's characteristics and the internal audit function or the external audit (Collier and Gregory, 1996; Scarbrough et al., 1998; Goddard and Masters, 2001; Raghunandan et al., 2001; Carcello, 2002; Abbott et al., 2003; Goodwin, 2003; Goodwin and Kent, 2006; Yatim et al., 2006; Hoitash and Hoitash; 2009; Rainsbury et al., 2009; Abbott et al., 2010; Singh and Newby, 2010). The definitions and measures of the separate independent variables are set out, in turn, below.

AC Independence

According to ASX CGC (2007) Recommendations 4.2, the AC should be structured so that it consists only of non-executive independent directors and is chaired by an independent AC chair. Based on previous studies, AC independence is measured as a percentage of independent directors on the committee (Goodwin and Kent, 2006; Yatim et al., 2006; Singh and Newby, 2010) or as a dichotomous variable equal to "1" when all the AC members are non-executive independent directors (Abbott et al., 2003; Rainsbury et al., 2003). A director is assumed to be independent if he or she is a non-executive (not part of a current

management team) who is not closely affiliated and has no related party transactions with the company.

ASX Listing Rule 12.7 requires the top 300 listed companies on the S&P/ASX All Ordinaries Index to establish an AC and follow ASX CGC recommendations (Recommendation 4.1, 4.2, 4.3 and 4.4). The next 200 companies on the Index are also required to establish an AC but not necessarily to follow ASX CGC recommendations (many still choose to do so). In this study, the independence of AC members is not examined as all the top 300 listed companies used in the sample will display the same level of independence characteristics. Instead, AC chair independence is tested, using a more demanding measure of independence than specified by the ASX. The chair of the AC plays an important role in shaping the agenda of the AC committee. The chair needs to have independence for the AC team to be seen to have credibility.

To date, no study examined the chair of AC independence by comparing the AC chair's common background data with the CEO and the CFO of the company (a new measure created for this study). A chair of the AC is deemed to be not independent if he or she shares a common background (same qualifications and same industry experience) with the CEO and/or the CFO of the company. It can be argued that with different qualifications and industry experience between the chair of the AC, CEO and CFO, the chair of the AC can be viewed as independent from the management because he or she would have a different mindset and arguments relating to particular financial reporting and auditing issues in the company and it is not dominated by one individual.

AC chair independence (ACCHAIRIND) is measured as a scale. Scores are assigned to AC chair, CEO and CFO based on respective qualification and industry experience categories as shown in Table 7. The numbers assigned to categories in Table 7 are for purposes of determining the extent of matching/non-matching of the background of AC chair with the backgrounds of the CEO and CFO.

Table 7: Qualification, Industry and Category

Qualification	Category
Accounting and Finance	1
Engineering	2
Law and Arts	3
Health and Science	4
Management and Marketing	5
Industry	**Category**
Mining and Energy	1
Banking, Insurance, Finance and Law	2
Service and Retail	3
Manufacturing	4
Health	5

Because there can be multiple qualifications and industry experiences in the background of any individual, the numbering scheme needs to ensure uniqueness of multiple backgrounds. This is achieved by adding a 0 to the category number if a single background category applies to an individual, and combining the digits if a multiple background applies. For example, if an AC chair has an accounting qualification, a score of 10 would be given as 1 for accounting and finance qualification category and 0 for no second qualification. Whereas, if an AC chair has both accounting and engineering qualifications a score of 12 would be given as 1 for accounting qualification category and 2 for engineering qualification category. Scores for AC chair qualification, AC chair industry experience, CEO qualification, CEO industry experience, CFO qualification and CFO industry experience are each collected.

Subsequently, a new single numbered score is assigned if AC chair matches or does not match one or more of the requirements: same qualifications to CEO and CFO and same industry experience to CEO and CFO. For instance, if an AC chair has a score of 10 for qualification and CEO has a score of 10 for qualification too (both an accounting and finance qualification), then a new score of 1 would be given. Also, if an AC chair has a score of 40 for industry experience and CEO has a score of 40 for industry experience (both from manufacturing industry), then a new score of 1 would also be given and added to the total score (total AC chair independence score is now equals to 2). The same process is carried out by comparing the scores of AC chair qualification with the scores of CFO qualification and

comparing the scores of AC chair industry experience with the scores of CFO industry experience. In the end, the scores will be totalled up. Thus, the scale can range from 0 (i.e., chair of AC is very independent) to 4 (i.e., chair of AC is not independent). This shows that the higher score on the scale of 0 to 4, the more similar are the backgrounds. Hence, the higher the score, the less independent the chair of the AC. An overview of the total scores is shown in Table 8.

Table 8: Overview of Total Scores

	AC Chair Independence	
	Qualification	Industry experience
CEO	1/0	1/0
CFO	1/0	1/0
Total	4/0 is the maximum/minimum score for AC chair independence from both the CEO and CFO.	

AC Expertise

To construct the expertise variables, biographical information of the AC members is collected from the annual reports and members are classified based on their qualifications. Earlier papers measured expertise as a percentage of AC members with an accounting or finance qualification (Goodwin and Kent, 2006; Yatim et al., 2006; Singh and Newby, 2010) or as a dichotomous variable equal to "1" if at least one member of the AC has accounting or financial management experience (Abbott et al., 2003; Mangena and Pike, 2004; Rainsbury et al., 2009). On the other hand, Hoitash and Hoitash (2009) took a different approach in measuring AC expertise. The authors divided expertise into accounting financial expertise and supervisory financial expertise where each category of expertise is measured as a proportion of the AC size.

ASX CGC (2007) states that the AC should include members, who are all financially literate, have relevant qualifications and have an understanding of the industry in which the entity operates. Following the ASX CGC's recommendation, two measures of expertise are constructed in this study. Expertise of the AC is measured by two independent variables: accounting/financial expertise (ACEXP) and industry expertise (ACINDUS). Accounting experts include AC members who are or were certified public accountants, charted

accountants, CFOs, vice presidents of finance, financial controllers, certified management accountants, certified financial analysts, principal financial officers, auditors or chief accounting officers (Hoitash and Hoitash, 2009). ACEXP is a ratio of number of AC members with accounting or financial qualification to total number of AC members while ACINDUS is a ratio of number of AC members who has worked in the same industry as the company for a substantial number of years (at least 10 years) to total number of AC members.

AC Meeting

Recent papers have supported the importance of AC frequency of meetings (Beasley et al., 2000 and Abbott et al. 2004). Given the various roles and responsibilities allocated to the AC, it needs to hold sufficient meetings to undertake its obligation effectively. The ASX CGC does not provide recommendations on the number of meetings that an AC should have each year. Following earlier studies (Abbott et al., 2003; Goodwin and Kent, 2006; Yatim et al., 2006; Hoitash and Hoitash, 2009; Singh and Newby, 2010), AC frequency of meetings (ACMEET) in this study measures the number of AC meetings held during the financial year ending in 2010.

AC Size

Psaros (2009) argued that an AC needs to have sufficient members such that different and informed views can be canvassed, and also so that it is not dominated by one individual. However, an AC needs to be sufficiently small such that it is focused, and streamlined in decision making to accounting and auditing demands. ASX CGC (2007) Recommendation 4.2 states that the AC should be structured so that it has at least three members. Three members is considered ideal by the ASX CGC as one member cannot possibly carry out the wide responsibilities of the AC and in an unforeseen circumstances that required a vote, there are enough numbers such that a majority decision can be made. In this study, AC size (ACSIZE) measures the number of members serving on the AC during the financial year ending in 2010 (Goodwin and Kent, 2006; Yatim et al., 2006; Hoitash and Hoitash, 2009; Singh and Newby, 2010).

AC Charter

AC formal charter shows the composition of the committee, its basic framework, structure, membership requirements and committee's responsibilities. According to ASX CGC (2007)

Recommendations 4.3, the AC should have a formal charter. The ASX CGC's Recommendations for an AC charter sets forward the minimum expectations of companies. To date, no study in Australia examines AC formal charter as one of the quality of AC's governance characteristics. Hence, in this study the presence of an AC formal charter is measured as a categorical variable. AC formal charter (ACCHAR) is equal to the value of "1" if the AC has a charter and "0" otherwise.

AC Fees

Agency conflicts arise due to separation of ownership and control between the shareholders and the managers of the company. The managers working on behalf of the shareholders do not usually act in the best interest of the shareholders. An AC that consists of independent non-executive directors, without a day-to-day responsibility is in a good position to perform a monitoring function for the shareholders (Goddard and Masters, 2001). The ASX CGC (2007) states that ACs are responsible for reviewing the entity's financial statements, ensuring the independence and competence of the external auditors and internal audit function and overseeing the entity's internal controls.

The wide roles and responsibilities of an AC will protect the interest of shareholders and thus, reduce the shareholders-managers agency conflicts. Agency costs arise due to the cost of hiring the AC to monitor the actions of the managers and directors of the company. In this study, AC fees (ACFEES) measures the total fees paid to the chair and AC members for the financial year ending in 2010.

A summary of the definitions and measurements of the independent variables is presented in Table 9.

Table 9: Definitions and Measurements of the Independent Variables

Independent Variables Acronym	Definition	Measurement	References
ACCHAIR IND	Chair of AC independence	Score is assigned if AC chair satisfies the requirements: same qualifications to CEO and CFO and same industry experience to CEO and CFO.	Abbott et al. (2003) Rainsbury et al. (2003) Goodwin and Kent (2006) Yatim et al. (2006) Singh and Newby (2010)
ACEXP	AC accounting/ financial expertise	(Number of AC members with accounting or financial qualifications) / Total AC members.	Abbott et al. (2003) Mangena and Pike, (2004) Goodwin and Kent (2006) Yatim et al. (2006) Hoitash and Hoitash (2009)
ACINDUS	AC industry expertise	{Number of AC members who worked in the same industry for a substantial number of years (at least 10 years)}/ Total AC members.	Rainsbury et al. (2009)
ACMEET	AC frequency of meetings	Number of AC meetings held during the financial year.	Abbott et al. (2003) Rainsbury et al. (2003) Goodwin and Kent (2006) Yatim et al. (2006) Hoitash and Hoitash (2009)
ACSIZE	AC size	Number of members serving on the AC during the financial year.	Goodwin and Kent (2006) Yatim et al. (2006) Hoitash and Hoitash, (2009) Singh and Newby (2010)
ACCHAR	AC formal charter	Equal to the value of "1" if AC has a charter and "0" otherwise.	Kalbers and Fogarty (1993)
ACFEES	AC fees	Total fees paid to the chair and AC members.	
ACFEES RATIO	AC fees ratio	Ratio of total fees paid to the chair and AC members to total number of AC members.	
AUDFEES RATIO	External audit fees ratio	Ratio of total external audit fees to total assets.	Hoitash and Hoitash (2009) Yatim et al. (2006)
IAFBUD RATIO	Internal audit function budget ratio	Ratio of total internal audit budget to total assets.	Carcello et al. (2005)

4.5.2.2 Dependent Variables

There are seven dependent variables employed in this study. The definitions and measures for these dependent variables are set out below.

Internal Audit Function Resourcing

Model 1 uses regression model approach similar to Carcello et al. (2005) where the authors addressed the relationship between the internal audit function budget and the AC review of the internal audit budget. In Model 1 of this study, the dependent variable is IAFBUD. IAFBUD measures the total annual internal audit function budget multiply by full-time equivalent staff. The total internal audit function budget measure is collected from question 9 in the questionnaire and the total annual internal audit function budget measure ranges from scale 1 to 7 (see Table 10).

Table 10: Internal Audit Function Budget Measure

Scale	Total Annual Budget
1	$20,000 and below
2	$21,000 to $50,000
3	$51,000 to $100,000
4	$101,000 to $200,000
5	$201,000 to $500,000
6	$501,000 to $1,000,000
7	$1,001,000 and above

Model 2 examines the association between labour hours devoted to the internal audit function and the effectiveness of AC role (AC's governance characteristics. Previous study, Abbott et al. (2010) investigated the association between the AC's oversights of the internal audit function and the nature of internal audit function activities. The dependent variable for Model 2 of this study is full-time equivalent staff working in the internal audit function. Full-time equivalent staff is a unit that indicates the workload of a full-time employee employed in the internal audit function in a way that makes workload comparable across the companies collected in the sample of this study.

To obtain a measure of full-time equivalent staff, the numerator of the formula is a multiplication of two products: maximum weekly working hours multiply by working weeks per year. The standard maximum weekly working hours in Australia is 38 weeks and the average working weeks per year is 52 weeks. The denominator of the formula is total hours per employee that are devoted to internal audit services which are obtained from question 10 in the questionnaire. Then, the whole fraction is multiply by the number of internal audit staff employed in the company which is obtained from question 8 in the questionnaire. A mathematical representation of full-time equivalent staff is:

$$\frac{\text{Maximum weekly working hours} \times \text{Working weeks per year}}{\text{Total hours per employee that are devoted to internal audit services}} \times \text{Number of internal audit staff employed in the company}$$

Internal Audit Function Independence

The results of many studies (Schneider and Wilner, 1990; McHugh and Raghunandan, 1994; Goodwin and Yeo, 1998; Van Peursem, 2005; Christopher et al., 2009) posited that the independence of the internal audit function plays an important role in an organisation. Model 3 and 4 of this study measures the association between the effectiveness of AC role (AC's governance characteristics) and the internal audit function independence. The dependent variable for Model 3 is internal audit function independence (IAFIND) and the dependent variable for Model 4 is AC support for the internal audit function independence (ACSUP_IAFIND). Both dependent variables are factor scores from a principal component analysis (PCA). PCA are performed to reduce the number of items in question 21 in the questionnaire into components that account for most of variance in the internal audit function independence variables.

External Audit Quality

Similar to most literature (Abbott et al., 2003; Goodwin and Kent, 2006; Yatim et al., 2006; Hoitash and Hoitash, 2009), the dependent variable for the Model 5 in this study is external audit fees. External audit fees are measured by the total value of audit fees paid by the company to the external auditors. The total audit fees are collected from the annual reports

and are then transformed into natural log (LNAUDFEES). The natural log is used to control for the skewed nature of audit fees (Yatim et al., 2006).

External Auditors Independence

The dependent variable for Model 6 is the ratio of non-audit fees to total fees (Abbott et al., 2003; Hoitash and Hoitash, 2009). The ratio of non-audit fees to total audit fees is transformed into natural log (LNNONAUDAFEES) too. Fees paid to external auditors consists of audit service fees as well as fees paid for other services such as taxation and management advice. While all fees potentially create economic bonds between the auditor and client, critics have alleged that the provision of non-audit services gives audit firms incentives to agree with accounting choices by management, thus reducing auditor independence and ultimately the quality of financial reporting (Coulton et al., 2007).

Shareholders Return

Lastly, Model 7 in this study tests the association between the audit-related agency monitoring costs (external audit fees, internal audit function budget and AC fees) and total shareholders return. The dependent variable for Model 7 is total shareholders return. Total shareholders return is calculate by subtracting share price at the end of the period with share price at the beginning of the period and adding dividend per share. The whole equation would then be divided by share price at the beginning of the period. A mathematical representation of total shareholders return is:

$$\frac{\text{(Share price at the end of the period - Share price at the beginning of the period + Dividend per share)}}{\text{Share price at the beginning of the period}}$$

A summary of the definitions and measurements of the dependent variables is presented in Table 11.

Table 11: Definitions and Measurements of the Dependent Variables

Independent Variables Acronym	Definition	Measurement	References
IAFBUD	Internal audit function budget	Total annual internal audit budget measure x full-time equivalent staff.	Carcello et al. (2005)
IAHOUR	Internal audit function hours	Full-time equivalent staff working in the internal audit function.	Abbott et al. (2003)
IAFIND	Internal audit function independence	Internal audit function independence is factor score from PCA.	Ahmad and Taylor (2009)
ACSUP_IAFIND		AC support for internal audit function independence is factor score from PCA.	
LNAUDFEES	Total value of audit fees paid by the firm to the external auditors	Total audit fees are collected from the company annual reports and are then transformed into natural log.	Hoitash and Hoitash (2009) Yatim et al. (2006)
LNNON AUDFEES	Total value of non-audit fees paid by the firm to the external auditors	Total fees paid for non-audit services divided by the total fees paid to the external auditors and are then transformed into natural log.	Hoitash and Hoitash (2009)
TSR	Total shareholders return	(Share price at the end of the period - Share price at the beginning of the period + Dividend per share) / Share price at the beginning of the period.	Habib and Azim (2008)

4.5.2.3 Control Variables

Additional variables are included in the regression models to control for other factors that are expected to potentially affect the dependent variables. The definitions and measures for these control variables are set out below.

Control Variables for Model 1 and Model 2

Both Model 1 and Model 2 control for the same effects of other variables. These models control for firm size: natural log of total assets (LNTA) and ratio of total long-term debt to total assets (LEVERAGE). A positive association between the control variables and the

dependent variables would be expected as larger and more leveraged firms are likely to increase the internal audit function labour hours and budget to ensure greater efficiency of the internal control system (Carcello et al., 2005 and Abbott et al., 2010). Since firm complexity has the potential to increase the need for better monitoring and internal controls, this study expects the control variables such as ratio of inventory to total assets (INVENRATIO), ratio of receivables to total assets (RECRATIO), ratio of number of foreign subsidiaries to total number of subsidiaries (FORSUB) and square root of total number of subsidiaries (SUB) to be positively related to the dependent variables.

Model 1 and 2 also control for growth (Carcello et al., 2005 and Abbott et al., 2010). According to Beasley (1996), firms experiencing rapid growth rates may experience deterioration in controls, driving the AC to demand more controls-oriented work. Thus, there will be a positive relationship between the three-year rate of sales growth (GROWTH) and the dependent variables. Furthermore, similar to Carcello et al. (2005), this study also expects a positive sign for operating cash flow (OPCASH) and ratio of current assets to current liabilities (CURATIO).

Control Variables for Model 3 and Model 4

Model 3 and 4 controls for firm size: natural log of total assets (LNTA). A positive association between firm size and the dependent variables would be expected as larger firm will ensure better internal audit function independence. The regression models also control for the quality of the external auditor by indicating whether the firm is audited by Big 4 auditors (BIG4), expecting a positive sign.

Control Variables for Model 5

Furthermore, Model 5 controls for the outcome of other variables that can affect the external audit fees. Studies have found external audit fees to be related to firm size, firm complexity, audit risk of the client firm, profitability, the use of Big 4 audit firm and industry (Simunic, 1980; Francis, 1984; Craswell and Francis, 1999; Abbott et al., 2003; Goodwin and Kent, 2006; Hoitash and Hoitash, 2009; Singh and Newby, 2010). Similar to Goodwin and Kent (2006) and Singh and Newby (2010), the firm size control variable is measured by the natural log of the firm's total assets (LNTA) and a positive sign is expected. The firm complexity control variable is measured by the square root of the total number of subsidiaries (SUB) and

the ratio of foreign subsidiaries to total number of subsidiaries (FORSUB) (Low et al., 1990; Simon, 1995). Firm complexity variables will be positively related to audit fees.

In addition, the risk level of the company is measured by whether the firm records a loss in any of the three years prior to 2010 (LOSS) and by the ratio of earnings before interest and tax to total assets (ROA) (Johnson et al., 1995). Further measures of risk also comprise of the ratio of receivables to total assets (RECRATIO), the ratio of non-current liabilities to total assets (DEBTRATIO) and the ratio of inventory to total assets (INVENRATIO) (Sumunic, 1980; Taylor, 1997). This study expects that ROA will be negatively related to audit fees and that there will be a positive association between the rest of the risk variables and audit fees. The regression model also controls for the quality of the external auditor by indicating whether the firm is audited by Big 4 auditors (BIG4), expecting a positive sign (Chan et al., 1993).

Moreover, this study includes control variables: whether the firm is in the mining sector (MINING), board-related factors involving board independence (BOARDINDEP) and number of board meetings (BOARDMEET). According to Carcello et al. (2002) and Abbott et al. (2003), board independence and board meetings are positively associated with audit fees. The reasoning is that outside directors on the board who act diligently will demand a higher quality of audit and thus leads to higher audit fees.

Control Variables for Model 6

The same control variables in Model 5 are also used in Model 6, the non-audit fees model. This study expects that firm size (LNTA) and complexity variables (SUB and FORSUB) are positively related to non-audit fees because larger and more complex firms are more likely to purchase non-audit services (Palmrose, 1986). Furthermore, risk variables such as LOSS, RECRATIO, DEBTRATIO and INVENRATIO (except for ROA) will be positively related with non-audit fees. Hoitash and Hoitash (2009) posited that risk variables reflect the financial state of the firm and its ability to invest in a good internal control system.

Similar to Model 5, Model 6 also controls for Big 4 auditors (BIG4). Since Big4 auditors have the potential to provide more non-audit services, this study expects that BIG4 variable will be positively associated to non-audit fees. In addition, control variables such as board

independence (BOARDINDEP) and number of board meetings (BOARDMEET) will be negatively associated to non-audit fees as board of directors whom are independent and diligent will demand less non-audit services to ensure the external auditors' independence.

Control Variables for Model 7

No control variables are employed in Model 7 for this study.

A summary of the definitions and measurements of the control variables are presented in Table 12.

Table 12: Definitions and Measurements of the Control Variables

Control Variables Acronym	Definition	Measurement	References
BIG4	Big 4 audit firm	Equal to the value of "1" if a Big 4 auditor is used and "0" when a smaller audit firm is used.	Simunic (1980) Francis (1984)
LNTA	Total assets	Natural log of total assets (in millions).	Palmrose (1986)
LEVERAGE	Leverage	Ratio of total long-term debt to total assets.	Low et al. (1990)
RECRATIO	Receivables ratio	Ratio of receivables to total assets.	Chan et al. (1993)
INVENRATIO	Inventory ratio	Ratio of inventory to total assets.	Johnson et al. (1995)
CURATIO	Current ratio	Ratio of current assets to current liabilities.	Simon (1995)
OPCASH	Operating cash flow	Ratio of operating cash flow to total assets.	Beasley (1996)
FORSUB	Foreign subsidiaries	Ratio of number of foreign subsidiaries to total number of subsidiaries.	Taylor (1997)
SUB	Subsidiaries	Square root of total number of subsidiaries.	Francis (1999)
LNAUDFEES	External audit fees	Natural log of total audit fees paid to external auditor.	Carcello et al. (2002)
GROWTH	Growth	Three-year rate of sales growth.	Abbott et al. (2003)
BODIND	Board of directors independence	Ratio of non-executive directors on the board to total number board of directors.	Carcello et al. (2005)
BODMEET	Board of directors meetings	Number of board meetings held during the year.	Goodwin and Kent (2006)
MINING	Mining	Equal to the value of "1" when the company is in the mining industry, "0" otherwise.	Hoitash and Hoitash (2009)
LOSS	Loss	Equal to the value of "1" if the company has reported a loss in any of the three years prior to, "0" otherwise.	Singh and Newby (2010)
ROA	Return on assets	Ratio of earnings before interest and tax to total assets.	Abbott et al. (2010)
DEBTRATIO	Debt ratio	Ratio of non-current liabilities to total assets.	

4.6 Model Specification

4.6.1 Introduction

There are seven ordinary least squares (OLS) multiple regression models used to test the hypotheses of this study. Regression analysis helps researchers to understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed. OLS regression models are used in this study to better understand which among independent variables (AC's governance characteristics) are related to the dependent variables (internal audit function and external audit).

Also, OLS regression models are employed to explore the forms of these relationships whether ACs in Australia are effective in fulfilling their roles in overseeing the quality of the internal audit function, ensuring the independence of the internal audit function, facilitating the quality of the external audit and ensuring the independence of the external auditors. Agency costs arise due to the cost of hiring the AC, as well as internal and external auditors to monitor the actions of the management in the company. Such agency costs are also tested using an OLS regression model.

4.6.2 AC Overseeing the Quality of the Internal Audit Function

Models 1 and 2 examine the effectiveness of AC roles in overseeing the quality of the internal audit function. The first model examines the association between the effectiveness of AC role, based on AC's governance characteristics (i.e., independence, financial and industry expertise, size, frequency of meetings and charter) and financial resources (internal audit function budget) devoted to the internal audit function. To test hypothesis one (a), this study employs an OLS regression model approach similar to Carcello et al. (2005), Goodwin and Kent (2006) and Abbott et al. (2010) that used an agency-based framework to explain the demand for internal audit services. The regression framework is summarized as follows:

MODEL 1

$$IAFBUD = b_0 + b_1ACCHAIRIND + b_2ACEXP + b_3ACINDUS + b_4ACMEET + b_5ACSIZE + b_6ACCHAR + b_7BIG4 + b_8LNTA + b_9LEVERAGE + b_{10}RECRATIO + b_{11}INVENRATIO + b_{12}CURATIO + b_{13}OPCASH + b_{14}FORSUB + b_{15}SUB + b_{16}LNAUDFEES + b_{17}GROWTH + \varepsilon$$

***Note**:* Refer to Table 9, 11 & 12 for definitions and measurements of the variables in Model 1.

The second model examines the association between the effectiveness of AC role and total hours devoted to the internal audit function. The result of running Model 2 will test hypothesis one (b). Similar to Abbott et al. (2010) the regression equation is summarized as follows:

MODEL 2

$$IAHOUR = b_0 + b_1ACCHAIRIND + b_2ACEXP + b_3ACINDUS + b_4ACMEET + b_5ACSIZE + b_6ACCHAR + b_7BIG4 + b_8LNTA + b_9LEVERAGE + b_{10}RECRATIO + b_{11}INVENRATIO + b_{12}CURATIO + b_{13}OPCASH + b_{14}FORSUB + b_{15}SUB + b_{16}LNAUDFEES + b_{17}GROWTH + \varepsilon$$

***Note**:* Refer to Table 9, 11 & 12 for definitions and measurements of the variables in Model 2.

4.6.3 AC Ensuring the Independence of the Internal Audit Function

Models 3 and 4 examine the association between the effectiveness of AC role in ensuring the independence of the internal audit function. The results of running both the models are to test hypothesis two (a) and hypothesis two (b) of this study. AC is an important vehicle in increasing the status and the independence of the internal audit function. Previous literature (McHugh and Raghunandan, 1994; Goodwin and Yeo, 2001; Christopher et al., 2009) argued that the relationship between the internal audit function and the AC could affect the internal auditor's independence. The regression equations are summarized as follows:

MODEL 3

$$IAFIND = b_0 + b_1ACCHAIRIND + b_2ACEXP + b_3ACINDUS + b_4ACMEET + b_5ACSIZE + b_6ACCHAR + b_7BIG4 + b_8LNTA + \varepsilon$$

MODEL 4

$$ACSUP\_IAFIND = b_0 + b_1ACCHAIRIND + b_2ACEXP + b_3ACINDUS + b_4ACMEET + b_5ACSIZE + b_6ACCHAR + b_7BIG4 + b_8LNTA + \varepsilon$$

Note: Refer to Table 9, 11 & 12 for definitions and measurements of the variables in Model 3 and Model 4.

4.6.4 AC Facilitating the Quality of the External Audit

Model 5 examines the relationship between the effectiveness of AC role and the quality of external auditors using audit fees. To test hypothesis three, this study employed and extended the traditional audit fee model (Simunic, 1980; Francis, 1984; Francis and Simon, 1987; Craswell and Francis, 1999). The regression equation is summarized as follows:

MODEL 5

$$LNAUDFEES = b_0 + b_1ACCHAIRIND + b_2ACEXP + b_3ACINDUS + b_4ACMEET + b_5ACSIZE + b_6ACCHAR + b_7BODIND + b_8BODMEET + b_9BIG4 + b_{10}MINING + b_{11}LOSS + b_{12}ROA + b_{13}INVENRATIO + b_{14}RECRATIO + b_{15}DEBTRATIO + b_{16}FORSUB + b_{17}SUB + b_{18}LNTA + \varepsilon$$

Note: Refer to Table 9, 11 & 12 for definitions and measurements of the variables in Model 5.

4.6.5 AC Ensuring the Independence of the External Auditors

Model 6 examines the association between the effectiveness of AC role and the independence of the external auditors. To test hypothesis four, whether strong ACs is associated with a lower ratio of non-audit fees to total audit fees (a proxy for the independence of the external auditors), this study extends the non-audit fees model. Previous studies (DeAngelo, 1981; Prakash and Venable, 1993; Firth, 1997) showed that non-audit fees can threaten the independence of external auditors. Model 6 is summarized as follows:

MODEL 6

$$LNNONAUDFEES = b_0 + b_1ACCHAIRIND + b_2ACEXP + b_3ACINDUS + b_4ACMEET + b_5ACSIZE + b_6ACCHAR + b_7BODIND + b_8BODMEET + b_9BIG4 + b_{10}MINING + b_{11}LOSS + b_{12}ROA + b_{13}INVENRATIO + b_{14}RECRATIO + b_{15}DEBTRATIO + b_{16}FORSUB + b_{17}SUB + b_{18}LNTA + \varepsilon$$

Note: Refer to Table 9, 11 & 12 for definitions and measurements of the variables in Model 6.

4.6.6 Audit-related Agency Monitoring Costs and Total Shareholders Return

Model 7 tests the association between the audit-related agency monitoring costs (external audit fees, internal audit function budget and AC fees) and total shareholders return. The result of running this model is to test hypothesis five. Model 7 is summarized as follows:

MODEL 7

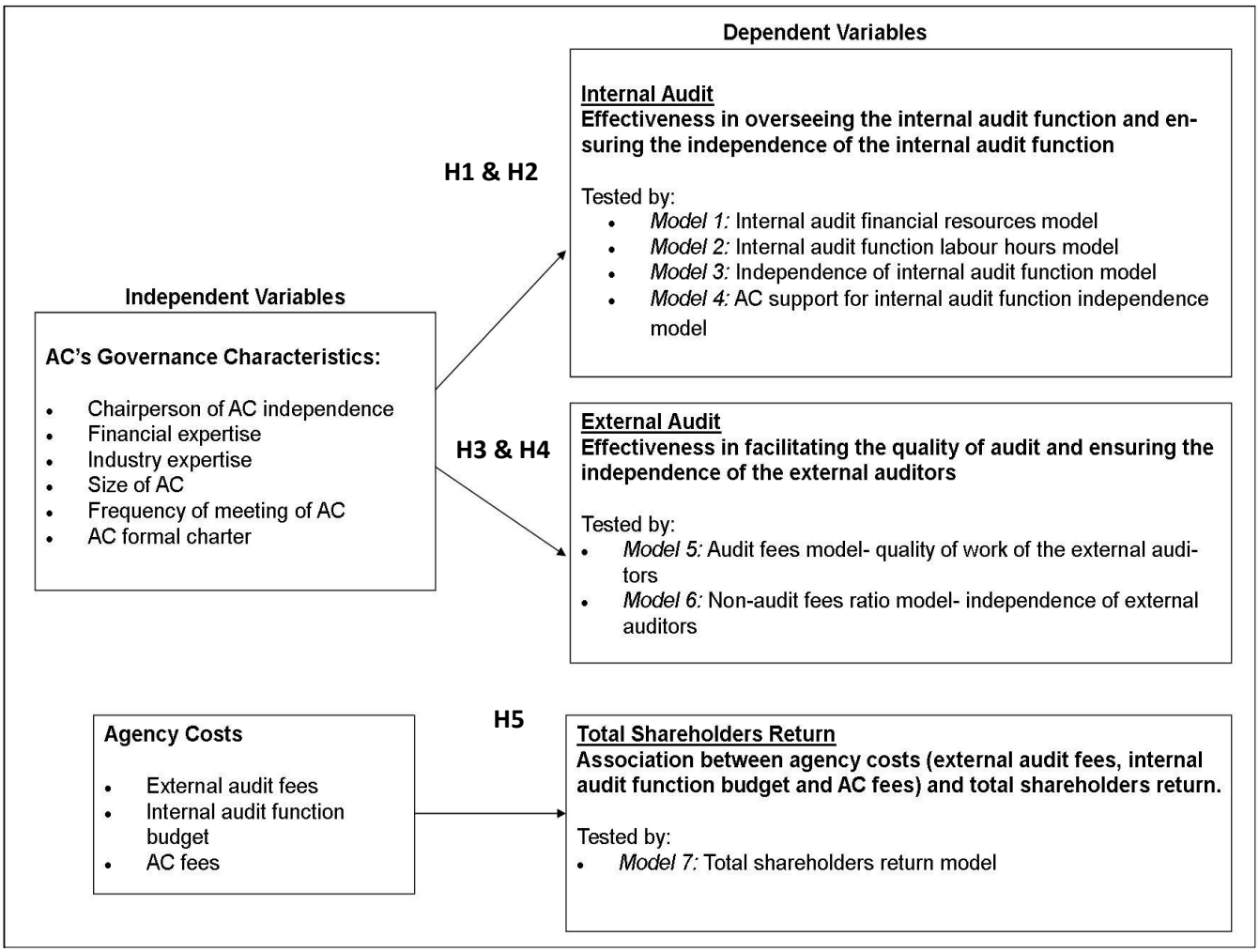
$$TSR = b_0 + b_1 ACFEESRATIO + b_2 AUDFEESRATIO + b_3 IAFBUDRATIO + \varepsilon$$

Note: Refer to Table 9, 11 & 12 for definitions and measurements of the variables in Model 7.

4.7 Conceptual Model

These model specifications are framed within the development of a conceptual model. The hypothesised relationships between the variables in this study are shown by the arrows connecting the boxes in Figure 1.

Figure 1: Conceptual Model



CHAPTER 5. DATA ANALYSIS AND DISCUSSION

5.1 Introduction

The main purpose of this chapter is to present the results of tests of the five hypotheses as set out in Chapter 3. Before presenting these hypotheses test results, the chapter begins by giving the profile, description and validation of variables for the questionnaire-data based sample (referred to as sample 1) and secondary-data based sample (referred to as sample 2), respectively. It further gives an explanation and justification of the methods of analysis that will be used on the data from samples 1 and 2, involving: (1) tests for small sample size relating to sample 1; (2) normality tests on data that will be used in parametric analysis; (3) explanation of the choice of model specifications; and (4) justification of the choice of correlation analysis and multiple regression analysis.

For sample 1 (questionnaire-data based sample), it is optional for the respondents to provide a company name but all 36 respondents did so. Hence, the primary data from the 36 respondents in sample 1 could be linked to the secondary data of their 36 corresponding companies drawn from the 255 companies in sample 2 (secondary-data based sample). Moreover, the questionnaire contains questions that go beyond those specifically required for use in testing the hypotheses of this study. Some data from sample 1 relating to internal audit function activities is used to measure variables contained in models that test hypotheses one and two, while other data from sample 1 is used in comparative case study analysis which is discussed in detail the next chapter (Chapter 6).

The secondary data from sample 2, on the other hand, is used to measure variables concerned with aspects of external audit, corporate governance characteristics and company financial results and structures. These variables arising from sample 2's data are used in models related to all the five hypotheses of this study.

5.2 Sample 1 (Questionnaire-data Based Sample): Profile, Description and Validation of Variables

5.2.1 Profile of the Questionnaire Respondents and their Companies

From Table 13, it can be seen that of the total of 36 respondents, approximately half (50%) are between 45 to 54 years of age, and 78% are male. Also the experience of the respondents in the internal audit field is reasonably high with 50% having more than 10 years experience in the field. 89% of the respondents' current job position is Chief Internal Auditor (CIA) or an equivalent title, while the remaining 11% of the respondents hold the CFO position.

Table 13 also shows the profile of the companies in which the respondents work. Approximately 44% of the companies surveyed are in the ASX top 101- 200 (based on market capitalisation), 42% of the companies are in the ASX top 21-100 while the rest of the companies, 14% are in the ASX top 20. The companies are well spread across the GICS industry sectors in the ASX with industries most represented being materials and financials (both at 22%) while health care and utilities are under-represented (both at 3%). No companies are represented in information technology and telecommunications services.

Table 13: Profile of the Respondents and Companies (n= 36)

No.	Questionnaire items	Frequency	
		No	%
1	Your age group:		
	Below 35	5	14
	35 to 44	8	22
	45 to 54	18	50
	55 to 64	5	14
	65 or older	0	0
2	Gender:		
	Male	28	78
	Female	8	22
3	How long have you worked in the internal audit field over your career?		
	Less than 5	8	22
	Between 5-10	10	28
	Between 11-15	6	17
	Between 16-20	7	19
	More than 20	5	14
4	What is your current job position?		
	Chief Internal Auditor or other similar titles	32	89
	CFO	4	11
6	Size of your company based on market capitalization:		
	ASX top 20	5	14
	ASX 21- 100	15	42
	ASX 101- 200	16	44
	ASX 301- 500	0	0
	ASX below 500	0	0
7	Industry of your company:		
	Consumer Discretionary	6	17
	Consumer Staples	5	14
	Energy	2	5
	Financials	8	22
	Health Care	1	3
	Industrials	5	14
	Information Technology	0	0
	Materials	8	22
	Telecommunication Services	0	0
	Utilities	1	3
	Others	0	0

5.2.2 Profile of ACs

Respondents are asked about the working relationship between the internal audit function and the AC. Their responses are summarised in Table 14. The number of meetings and the length of meetings per year between the respondents (CIA) and the AC are presented in Panel A of Table 14. A total of 70% of CIAs attended 4 to 5 meetings a year with the AC and the length of the meetings is between 81 to 120 minutes for 36% of the respondents. As an indicator of the diligence of the AC, these results compare favourably with previous studies that found CIAs have about 4 meetings per year with the AC (Raghunandan et al., 1998; Scarbrough et al., 1998; Goodwin and Yeo, 2001). Raghunandan et al. (2001) reported on average, 3.3 meetings per year with the CIAs and 4.53 times per year for Goodwin (2003). Raghunandan et al. (2001) and Goodwin (2003) also reported on the length of the meetings, which is on average 60 and 99 minutes respectively.

In terms of privacy of the meetings with the AC, 36% of the CIAs in this study have some meetings in a year that have private time, while 8% of the respondents have all meetings that are totally private and 22% of the respondents have no private meetings at all with the CIA. So there is no common practice concerning the confidentiality that the CIA can have from other executives when meeting with the AC. The 22% of CIAs who indicated no private meetings with the AC could prospectively have their independence compromised.

Further results in Table 14, Panel A, show 58% of ACs receive 3 to 5 routine internal audit reports per year, and 84% of ACs receive 1 to 5 special investigation reports from the internal audit function. Moreover, ACs review or assess the plans of the internal audit function in terms of scheduling of work projects, on average, 3.64 times a year (shown in Panel B, Table 14). In terms of coordination between the internal audit function and the external auditors, the AC reviews this on average 3.25 times a year. These results compare favourably with earlier studies by Raghunandan et al. (1998) and Goodwin and Yeo (2001) where both studies found that almost 70% of ACs review all plans, budgets and results relating to financial reporting, internal controls and compliance. Likewise, Scarbrough et al. (1998) found that 69% of ACs review the proposed internal audit program.

On the issue of financial expertise, CIAs are requested to rate the overall expertise of their AC members in regards to accounting, auditing and internal control matters. Results in Panel

A of Table 14 show that 64% of respondents perceived their AC to have excellent expertise, with a further 25% reporting that their AC members have good expertise. Only one respondent rated his/her AC expertise as poor.

Generally, results in Table 14 suggest that there is a considerable level of communication and interaction between the CIA and the AC in large listed companies through formal meetings, presentations of reports by the CIA and reviews of the internal audit function's plans, budgets and results by the AC. This considerable communication and interaction between the CIA and the AC is in line with expectations of recommended practice issued by both the ASX and the IIA. The ASX's CGC recommends that a key role of the AC is overseeing and monitoring the internal audit function, while the IIA (2002a, 2002b, 2003a, 2003b) recommends that communication between the personnel responsible for the internal audit function and the AC is important for the maintenance of good corporate governance.

Table 14: AC and the Internal Audit Function (n= 36)

PANEL A			
No.	**Questionnaire items**	**Frequency**	
		No	**%**
16	How many times a year does you/ your internal audit function meet with the AC and how long is the length of the meeting? (n= 36)		
	Number of meetings a year:		
	Less than 1	1	3
	Between 2- 3	3	8
	Between 4- 5	25	70
	Between 6- 7	4	11
	More than 7	3	8
	Length of the meetings:		
	Less than 40 minutes	6	17
	Between 40- 80 minutes	8	22
	Between 81- 120 minutes	13	36
	Between 121- 160 minutes	2	6
	More than 160 minutes	7	19
17	In terms of privacy of your meetings with the AC (chair, individual members or committee): (n= 36)		
	All meetings are totally private	3	8
	All meetings are partially private	12	34
	Some meetings in a year have private time	13	36
	No private meetings	8	22
18	How do you rate the overall expertise of the AC members in regards to accounting, auditing and internal control matters? (n=36)		
	Poor	1	3
	Moderate	3	8
	Good	9	25
	Excellent	23	64
20	How often per year does the AC receive reports from your internal audit function related to: (n= 36)		
	Routine internal audit activities:		
	None per year	0	0
	1-2 per year	6	17
	3-5 per year	21	58
	6 or more per year	9	25
	Special Investigations:		
	None per year	3	8
	1-2 per year	15	42
	3-5 per year	15	42
	6 or more per year	3	8

PANEL B						
No.	**Questionnaire items**	**Mean**	**Median**	**25th %**	**75th %**	**Std. Dev.**
19	Likert-Scale (1= Never, 2= Seldom, 3= Sometimes, 4= Often, 5= Almost Always) How often does the AC review or assess the plans of the internal audit function in terms of its:					
	Scheduling of work projects	3.64	4.00	3.00	4.00	1.18
	Co-ordinating with the external auditors	3.25	3.00	2.00	3.00	1.25

5.2.3 Descriptive Statistics for Variables in Model 1 and Model 2

The descriptive statistics for variables in Model 1 and Model 2 are presented in Tables 15 and 16. Table 15 gives results relating to the internal audit function's resources and activities (from questions 8 to 10 of the questionnaire).

In Panel A, it shows 58% of the respondents' internal audit function has human resources of less than 5 professional internal audit staff employed and only 8% have more than 20 professional internal audit staff employed. Panel A further shows the extent of money resources in the form of the total annual internal audit function budget. More than half, 54% of the respondents' internal audit function has a total annual budget ranging from $201,000 to $1,000,000, with a further 31% reporting a total annual budget, above $1,001,000. Turning to the work activity level of the internal audit function, Panel B in Table 15 indicates the total hours devoted to internal audit services. On average, 1,489 hours per annum (or 28 hours per week) per person are devoted to internal audit services by professional staff during the 2010 financial year. This suggests not all professional staff is employed in the internal audit function on a full-time basis.

Table 15: Internal Audit Function Activities (n= 36)

PANEL A			
No.	**Questionnaire items**	**Frequency**	
		No	**%**
8	How many professional internal audit staff is employed in your company?		
	Less than 5	21	58
	Between 5- 10	9	25
	Between 11- 15	2	6
	Between 16- 20	1	3
	More than 20	3	8
9	What is the total annual internal audit budget?		
	$20,000 and below	1	3
	$21,000 to $50,000	1	3
	$51,000 to $100,000	1	3
	$101,000 to $200,000	2	6
	$201,000 to $500,000	10	27
	$501,000 to $1,000,000	10	27
	$1,001,000 and above	11	31

PANEL B						
No.	**Questionnaire items**	**Mean**	**Median**	**25th %**	**75th %**	**Std. Dev.**
10	How many total hours are devoted to internal audit services by professional staff (per person) during your company's most recent financial year?	1,488.89	1,550.00	1,060.00	1975.00	661.13

Descriptive statistics for the variables in Table 16 are drawn from sample 2's (secondary-data based sample) published data of the 36 respondents' companies. Panel A of Table 16 reports statistics for continuous variables while Panel B reports statistics for dichotomous variables.

The AC's governance characteristics (independent variables) are the variables of interest in this study. The size of ACs (ACSIZE) ranges from 2 to 9 members, with a mean of 3.53 members. On average 4.47 AC frequency of meetings (ACMEET) are held during the financial year ending in 2010 with a minimum of 0 meeting and a maximum of 9 meetings. The mean percentage of AC members with accounting or financial qualifications to total members (ACEXP) is 69%, ranging from 25% to 100%. Furthermore, the mean percentage of total AC members that have worked in the same industry for at least 10 years (ACINDUS) is

about 50%. The mean AC chair independence (ACCHAIRIND) is 65% of cases. The inference from these results is that AC characteristics of size and frequency of meetings, expertise and independence are quite variable across the 36 companies in sample 1.

In terms of control variables, Table 16 reveals considerable diversity in the sample. The total audit fees paid to the external auditors (AUDFEES) range from a minimum of $0.13 million to a maximum of $16.38 million, with a mean of $2.74 million; the number of subsidiaries (SUB) in this study ranges from 1.73 to 22.72 with a mean of 8.08 subsidiaries; the percentage of foreign subsidiaries to total subsidiaries (FORSUB) ranges from 0% to 81%, with a mean of 36%; the levels for inventory (INVENRATIO) and receivable ratios (RECRATIO) are at both ends of the liquidity scale, with means of 7% and 19% respectively; leverage (LEVERAGE) and current (CURATIO) ratios display means of 23% and 166% correspondingly; operating cash flows ratio (OPCASH) shows a minimum of -13% and a maximum of 139%; growth rate (GROWTH) shows a minimum of -33% and a maximum of 182%.

In Model 1 and Model 2, the dependent variables are measures of the internal audit function's relative extent of monetary resourcing (IAFBUD) and human resourcing (IAFHOUR). They reflect the importance accorded to the internal audit function, which should largely be championed by the AC as the company's oversight body for the internal audit function. Table 16, Panel A, shows that the average total annual internal audit budget per full-time equivalent internal audit staff member (IAFBUD) is $45.56, ranging from a minimum of $0 to a maximum of $532. The number of full-time equivalent staff working in the internal audit function (IAHOUR) is between 0 and 76 with an average staff size of 6.83.

Additional corporate governance characteristics are shown in Panel B of Table 16. Results indicate that almost all companies in sample 1 have a formal charter for their AC. Also almost all companies engage a Big 4 auditor firm as their external auditors.

Table 16: Descriptive Statistics for Model 1 and Model 2 (n=36)

PANEL A: Continuous Variables					
Variable Name	**Mean**	**Median**	**Minimum**	**Maximum**	**Standard Deviation**
ACCHAIRIND	0.65	0.75	0.25	1.00	0.24
ACEXP	0.69	0.67	0.25	1.00	0.21
ACINDUS	0.50	0.33	0.00	1.00	0.28
ACMEET	4.47	4.00	0.00	9.00	1.86
ACSIZE	3.53	3.00	2.00	9.00	1.16
LEVERAGE	0.23	0.90	0.00	3.71	0.61
RECRATIO	0.19	0.72	0.00	3.33	0.55
INVENRATIO	0.07	0.04	0.00	0.24	0.08
CURATIO	1.66	1.28	0.01	10.27	1.71
OPCASH	0.13	0.08	-0.13	1.39	0.23
FORSUB	0.36	0.37	0.00	0.81	0.29
SUB	8.08	7.28	1.73	22.72	4.90
GROWTH	0.16	0.03	-0.33	1.82	0.41
IAFBUD	45.56	13.00	0.00	532.00	96.20
IAHOUR	6.83	2.00	0.00	76.00	13.67
ASSET ($)	24,800M	3,090M	163.4M	0.60B	0.10B
AUDFEES ($)	2.74M	1.14M	0.13M	16.38M	4.11M

PANEL B: Dichotomous Variables				
Variable Name	**Mean**	**Median**	**Number of Firms Coded "0"**	**Number of Firms Coded "1"**
ACCHAR	0.94	1.00	2	34
BIG4	0.97	1.00	1	35

Note: ACCHAIRIND is ratio of total scores assigned to each of the two criteria for AC chair independence; ACEXP is ratio of number of AC members with accounting or financial qualifications to total AC members; ACINDUS is ratio of number of AC members worked in the same industry for a substantial number of years (at least 10 years) to total AC members; ACMEET is number of AC meetings held during the financial year; ACSIZE is number of members serving on the AC during the financial year; LEVERAGE is ratio of total long-term debt to total assets; RECRATIO is ratio of receivables to total assets; INVENRATIO is ratio of inventory to total assets; CURATIO is ratio of current assets to current liabilities; OPCASH is ratio of operating cash flow to total assets; FORSUB is ratio of number of foreign subsidiaries to total number of subsidiaries; SUB is square root of total number of subsidiaries; GROWTH is three-year rate of sales growth; IAFBUD is total annual internal audit budget measure * full-time equivalent staff; IAHOUR is full-time equivalent staff working in the internal audit function; ASSET is total assets; AUDFEES is total of audit fees; ACCHAR is equal to the value of "1" if the AC has a charter and "0" otherwise; BIG4 is equal to the value of "1" if a Big 4 auditor is used and "0" when a smaller audit firm is used.

5.2.4 Validity and Reliability Tests on Variables in Model 3 and Model 4

To test the construct validity of the concept of independence of the internal audit function, confirmatory factor analysis based on the principal components approach (PCA) is performed. PCA is used to reduce the 6 items or sub-questions of internal audit function independence into components that account for most of the variance. PCA seeks a linear combination of variables such that the maximum variance is extracted from the variables. It then removes this variance and seeks a second linear combination which explains the maximum proportion of the remaining variance, and so on (Habib and Azim, 2008). An orthogonal rotation (varimax) is used because this allows the 6 items to be more highly loaded onto each factor resulting in more interpretable clusters of factors.

The Kaiser-Meyer-Olkin (KMO) measure verifies the sampling adequacy for the analysis. For the sample 1 data, this test gives KMO= 0.677 (acceptable according to Field, 2009), and all KMO values for individual items are more than 0.529, which is above the acceptable limit of 0.5 (Field, 2009). Further, Bartlett's test of sphericity $x^2(36)= 97.25$ is significant, indicating that the correlations between components are (overall) significantly different from zero. Then an initial analysis is run to obtain eigenvalues for each component in the data.

As shown in Table 17, two components have eigenvalues over Kaiser's criterion of 1 and in combination explained 72.17% of the variance. Based on the scree plot in Figure 2, the point of inflexion occurs at the second data point (component); therefore only one component is extracted. However, the scree plot does not provide a particularly reliable criterion for faction selection. Given the small sample size, Kaiser's criterion on two components is the number of components retained in the final analysis.

Table 17 shows the factor loadings after rotation. Loadings less than 0.70 are excluded; the analysis yields a two-factor solution. Stevens (2002) recommends that for a small sample size a loading of 0.70 can be considered significant. The items that cluster on the same components suggest that component 1 represents internal audit function independence (IAFIND) and component 2 represents AC support for internal audit function independence (ACSUP_IAFIND). The factor scores from these two components will be used in the subsequent regression models (Model 3 and Model 4) when examining the association between the effectiveness of AC role and internal audit function independence.

Figure 2: Scree Plot

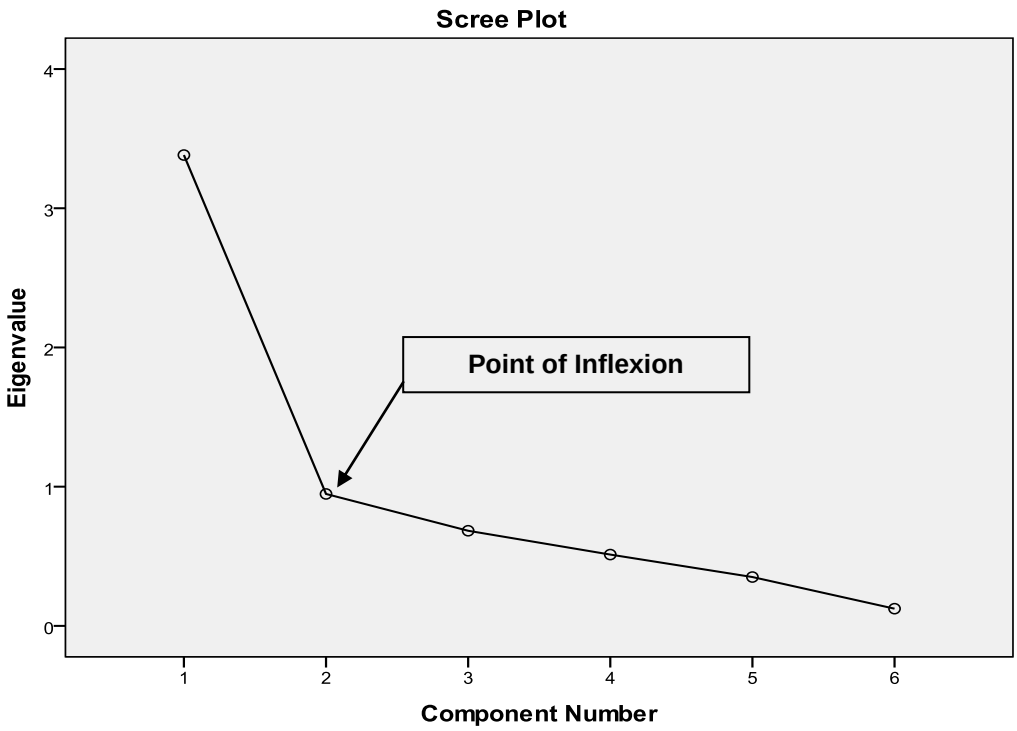


Table 17: Summary of Confirmatory Factor Analysis Results for Internal Audit Function Independence (n= 36)

Item	Rotated Factor Loadings	
	Internal audit function independence (IAFIND)	**AC support for internal audit function independence (ACSUP_IAFIND)**
Your internal audit function puts a great deal of effort beyond that normally expected in order to ensure dedication to independence.	***0.706***	0.203
Your internal audit function would resist almost any type of pressure and threat in order to maintain independence.	0.545	0.605
When your internal audit function is required to work under both an 'audit' role and 'advisory service' role by the management this will never compromise independence in the audit role.	***0.892***	0.131
The existing relationship between the AC (or its chair) and the internal auditor provides a strong backing for the maintenance of your internal audit function's independence.	0.477	***0.713***
The independence of your internal audit function is strongly upheld because of AC members have strong collective independence.	0.155	***0.907***
The AC would be prepared to take action to maintain the independence of your internal audit function if it is threatened by management.	0.127	***0.846***
Eigenvalues	1.048	3.382
Percentage of total variance	15.795	56.371
Number of test measures	2	3

Note: Factor loadings over 0.70 appear in bold and italic

Since this study has a small sample size (n= 36), caution needs to be taken when a factor analysis is performed. Further considerations are necessary. These are: 1) to apply Bartlett's test of sphericity (Cooley and Lohnes, 1971); 2) to have at least five times as many observations in the study as the number of variables (Hair et al., 1995); and 3) to have components with factor loadings above 0.70 (Stevens, 2002). In this study, the result of Bartlett's test of sphericity is significant. Moreover, there are more than five times the number of observations to variables (there are two variables and 36 observations). All the component loadings are more than 0.70. Consequently, these three tests suggest that the results of factor analysis in this study produce two separate valid independent variables.

5.2.5 Descriptive Statistics for Variables in Model 3 and Model 4

The descriptive statistics for variables in Model 3 and Model 4 are presented in Tables 18 and 19. Table 18 shows the scoring of the items for internal audit function independence by the 36 respondents (CIAs). The results for these separate items suggest that the staff in the internal audit function:

1) Put in a reasonable high effort in order to ensure dedication to independence (with a mean [median] agreement of 3.69 [4.00]);
2) Resist almost any type of pressure and threat in order to maintain independence (with a mean [median] agreement of 4.42 [4.00]);
3) Seek to be seen not to compromise their independence when required to work under both an 'audit' role and 'advisory service' role (with a mean [median] agreement of 3.92 [4.00]);
4) Believe the relationship between the AC (or its chair) and the CIA provides a strong backing for the maintenance of the internal audit function's independence (with a mean [median] agreement of 4.19 [4.00]);
5) Believe the independence of the internal audit function is seen to be strongly upheld when AC members have strong collective independence (with a mean [median] agreement of 4.28 [4.00]); and
6) See the AC as being prepared to take action to maintain the independence of the internal audit function if it is threatened by the management (with a mean [median] agreement of 4.31 [4.00]).

In summary, the results in Table 18 indicate that CIAs' rate their company's internal audit function as having a satisfactory level of independence from the management and the AC as providing strong support to the internal audit function independence.

Table 18: Internal Audit Function Independence (n= 36)

No.	Questionnaire items	Mean	Median	25th %	75th %	Std. Dev.
21	*Likert-Scale (1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree) Please indicate your level of agreement with the following statements: (n= 36)*					
	Your internal audit function puts a great deal of effort beyond that normally expected in order to ensure dedication to independence.	3.69	4.00	3.00	4.00	0.89
	Your internal audit function would resist almost any type of pressure and threat in order to maintain independence.	4.42	4.00	4.00	5.00	0.60
	When your internal audit function is required to work under both an 'audit' role and 'advisory service' role by the management this will never compromise independence in the audit role.	3.92	4.00	4.00	4.75	0.94
	The existing relationship between the AC (or its chair) and the internal auditor provides a strong backing for the maintenance of your internal audit function's independence.	4.19	4.00	4.00	5.00	0.98
	The independence of your internal audit function is strongly upheld because of AC members have strong collective independence.	4.28	4.00	4.00	5.00	0.78
	The AC would be prepared to take action to maintain the independence of your internal audit function if it is threatened by management.	4.31	4.00	4.00	5.00	0.79

Descriptive statistics for the dependent variables in Model 3 and Model 4 are presented in Table 19. The results of the independent variables (ACCHAIR, ACEXP, ACINDUS, ACMEET, ACSIZE and ACCHAR) and control variables (ASSET and BIG4) in Model 3 and Model 4 have been discussed in Section 5.2.3. IAFIND (internal audit function independence) and ACSUP_IAFIND (AC support for internal audit function independence) are the dependent variables of Model 3 and Model 4 which are generated from PCA above. The average internal audit function independence (IAFIND) is 3.81, ranging from a minimum of 2.00 to a maximum of 5.00 with a standard deviation of 0.77, while the average AC support for the internal audit function independence is higher at 4.26, ranging from a minimum of 2.67 and to a maximum of 5.00 with a standard deviation of 0.74.

Table 19: Descriptive Statistics for Dependent Variables in Model 3 and Model 4 (n=36)

Variable Name	Mean	Median	Minimum	Maximum	Standard Deviation
IAFIND	3.81	4.00	2.00	5.00	0.77
ACSUP_IAFIND	4.26	4.33	2.67	5.00	0.74

Note: IAFIND is internal audit function independence; ACSUP_IAFIND is AC support for internal audit function independence.

5.2.6 Descriptive Statistics for Variables in Model 7

Descriptive statistics for the independent and dependent variables in Model 7 are presented in Table 20. The ratio of total fees paid to the chair and AC members to total number of AC members (ACFEESRATIO) ranges from a minimum of $2,000 to a maximum of $28,967, with a mean of $11,552. Moreover, the ratio of total of external audit fees to total assets (AUDFEESRATIO) ranges from a minimum of 0.003% to a maximum of 17.47%, with a mean of 0.109%. The mean ratio of total internal audit budget to total assets (IAFBUDRATIO) for the sample is 502.45 ranging from a minimum of 1.03 to a maximum of 4,975. The variables described (ACFEESRATIO, AUDFEESRATIO and IAFBUDRATIO) are the independent variables of this study. On the other hand, the dependent variable, total shareholders return (TSR) shows a mean of 5.06 ranging from a minimum of -0.76 to a maximum of 11.53 with a standard deviation of 3.43.

Table 20: Descriptive Statistics for Variables in Model 7 (n=36)

Variable Name	Mean	Median	Minimum	Maximum	Standard Deviation
TSR	5.06	5.38	-0.76	11.53	3.43
ACFEESRATIO	11,552	10,000	2,000	28,967	6,426
AUDFEESRATIO	0.00109	0.00043	0.00003	0.17478	0.00288
IAFBUDRATIO	502.45	148.87	1.03	4,975.15	1,031.96

Note: TSR is total shareholders return [(Share price at the end of the period - Share price at the beginning of the period + Dividend per share) / Share price at the beginning of the period]; ACFEESRATIO is ratio of total fees paid to the chair and AC members to total number of AC members. AUDFEESRATIO is ratio of total of external audit fees to total assets; IAFBUDRATIO is ratio of total internal audit budget to total assets.

5.3 Sample 2 (Secondary-data Based Sample): Profile, Description and Validation of Variables

5.3.1 Industry Distribution

The industry distribution of the 255 companies in sample 2 is provided in Table 21. The number of firms in each GICS industry sector ranges from 3 to 69. The industries most represented are materials (27.1%) and industrials (17.3%), while telecommunications services (1.2%) and information technology (3.1%) are under-represented.

Table 21: Industry Distribution (n= 255)

GICS Industry Sector	Number of Companies	Percentage (%)
Consumer Discretionary	29	11.4
Consumer Staples	10	3.9
Energy	33	12.9
Financials	38	14.9
Health Care	12	4.7
Industrials	44	17.3
Information Technology	8	3.1
Materials	69	27.1
Telecommunications Services	3	1.2
Utilities	9	3.5
Total	**255**	**100**

5.3.2 Descriptive Statistics for Variables in Model 5 and Model 6

Descriptive statistics for variables in Model 5 and Model 6 are presented in Table 22. Panel A reports statistics for continuous variables. In sample 2 (n= 255), company size in terms of total assets (ASSET) ranges from a minimum of $14.42 million to a maximum of $700 billion, with a mean of $15.4 billion. The total audit fees paid to the external auditors (AUDFEES) also ranges widely from a minimum of $25,450 to a maximum of $196.79 million, with a mean of $2.38 million, as does the total non-audit fees (NONAUDFEES), ranging from $0 to $12.84 million, with a mean of $663,543.

The number of subsidiaries (SUB) attached to companies in this sample is also a high variance, ranging from 0 to 974, with a mean of 51.06 subsidiaries. The percentage of foreign subsidiaries to total subsidiaries (FORSUB) ranges from 0% to 100%, with a mean of 32%. The minimum and maximum level for inventory (INVENRATIO) and receivable (RECRATIO) ratios have means of 9% and 7% respectively (i.e., not showing high levels of audit risk). Moreover, debt ratio (DEBTRATIO) and return on assets (ROA) display means of 18% and 6% respectively and both have the same standard deviation of 20%.

Of particular interest to this study are the AC's governance characteristics. In this study, the size of AC (ACSIZE) ranges from 2 to 9 members, with a mean of 3.38 members. The number of AC meetings held during the year (ACMEET) averages 4.09 with a minimum of 0 meetings and a maximum of 9 meetings. The mean percentage of AC members with accounting or financial qualifications to total members (ACEXP) is 60%, ranging from 0% to 100%. Furthermore, the mean percentage of total members that has worked in the same industry for at least 10 years (ACINDUS) is 54%. ACCHAIRIND, the test of AC chair independence shows a percentage mean of 63%.

In terms of the composition of the board, Table 22 reveals that the average number of non-executive directors on the board (BODNONEX) for the sample is 5.39, ranging from a minimum of 2 to 10 non-executive board members. The number of directors on the board (BODSIZE) is between 3 and 13 with an average board size of 6.92. The mean percentage of non-executive directors on the board to total number of directors (BODIND- test of board of directors' independence) is 77%. Finally, Panel B in Table 22 reveals that sample 2 is made up of 87% of companies that have an AC charter (ACCHAR), 85% that have a Big 4 external

auditor (BIG4), 23% that are in the mining industry (MINING), and 50% that reported a net loss during the past 3 years (LOSS).

Table 22: Descriptive Statistics Variables in Model 5 and Model 6 (n=255)

PANEL A: Continuous Variables					
Variable Name	**Mean**	**Median**	**Minimum**	**Maximum**	**Standard Deviation**
ACCHAIRIND	0.63	0.75	0.00	1.00	0.26
ACEXP	0.60	0.67	0.00	1.00	0.24
ACINDUS	0.54	0.50	0.00	1.00	0.25
ACMEET	4.09	4.00	0.00	9.00	0.25
ACSIZE	3.38	3.00	2.00	9.00	0.86
BODNONEX	5.39	5.00	2.00	10.00	1.79
BODSIZE	6.92	7.00	3.00	13.00	1.94
BODIND	0.77	0.80	0.40	1.00	0.11
BODMEET	11.80	11.00	3.00	37.00	4.74
ROA	0.06	0.07	-1.12	1.75	0.20
INVENRATIO	0.09	0.04	0.00	0.58	0.12
RECRATIO	0.07	0.03	0.00	0.43	0.09
DEBTRATIO	0.18	0.13	0.00	1.10	0.20
SUB	51.06	23.00	0.00	974.00	88.63
FORSUB	0.32	0.22	0.00	1.00	0.31
ASSET ($)	15.4B	919M	14.42M	700B	78.8B
AUDFEES ($)	2.38M	493,620	25,450	196.79M	12.66M
NONAUDFEES ($)	663,543	169,000	0.00	12.84M	1.57M

PANEL B: Dichotomous Variables				
Variable Name	**Mean**	**Median**	**Number of Firms Coded "0"**	**Number of Firms Coded "1"**
ACCHAR	0.87	1.00	34	221
BIG4	0.85	1.00	38	217
MINING	0.23	0.00	196	59
LOSS	0.50	1.00	127	128

Note: ACCHAIRIND is ratio of total scores assigned to each of the two criteria for AC chair independence; ACEXP is ratio of number of AC members with accounting/financial qualifications to total AC members; ACINDUS is ratio of number of AC members who has worked in the same industry for a substantial number of years (at least 10 years) to total AC members; ACMEET is number of AC meetings held during the financial year; ACSIZE is number of members serving on the AC during the financial year; BODNONEX is total number of non-executive directors on the board; BODSIZE is total number of directors on the board; BODIND is ratio of non-executive directors on the board to total number board of directors; BODMEET is number of board meetings held during the year; ROA is ratio of earnings before interest and tax to total assets; INVENRATIO is ratio of inventory to total assets; RECRATIO is ratio of receivables to total assets; DEBTRATIO is ratio of non-current liabilities to total assets; SUB is number of subsidiaries; FORSUB is ratio of number of foreign subsidiaries to total number of subsidiaries; ASSET is total assets; AUDFEES is total of audit fees; NONAUDFEES is total of non-audit fees; ACCHAR is equal to the value of "1" if the AC has a charter and "0" otherwise; BIG4 is equal to the value of "1" if a Big 4 auditor is used and "0" when a smaller audit firm is used; MINING is equal to the value of "1" when the company is in the mining industry, "0" otherwise; LOSS is equal to the value of "1" if the company has reported a loss in any of the three years prior to, "0" otherwise.

5.4 Hypotheses Testing

5.4.1 Normality of the Variables

Initial descriptive statistics for the variables to be modeled in this study suggest that all the independent variables have non-normality in their data distributions. Non-normality is detected for these variables due to significance values for both Kolmogorov-Smirnov test and Shapiro-Walk test ($p< 0.05$). Also, skewness and kurtosis levels are found to be outside normal tolerance limits. For all the independent variables in the models employed to test all five sets of hypotheses, the Blom normal score transformation is applied because neither logarithmic nor square root transformation is able to yield a normal distribution of these measures (Kanel et al., 2008). Blom scores represent rank approximations of the exact order of a normal distribution (Kraja et al., 2007). Using Blom's proportional estimation formula in SPSS, the assumption of normality is satisfied (data is normally distributed).

5.4.2 Test for Small Sample Size of Sample 1

The size of the sample used in a multiple regression has a direct effect on the statistical power (R^2) of the model and the generalisability of the results. Since the size of sample 1 of this study is small (a total of 36 responses collected from the questionnaire), the findings can be weakened when using multiple regressions. According to Hair et al. (1995), a small sample that is characterized as having fewer than 20 observations, will be appropriate only for bivariate analysis using correlations or simple regression with a single independent variable.

To gauge whether the sample size in this study has a direct and sizable impact on statistical power, Hair et al.'s (1995) criterion is used. As shown in Table 23, this criterion compares the significance level (α) and the number of independent variables in detecting a significant R^2. The values provided in this table are the minimum R^2 that the given sample size will detect as statistically significant at significance level (α) of 0.05.

This study employs 6 independent variables and 11 control variables. With sample size of 36 (>20), these results satisfy the sample size statistical power test as Models 1, 2, 3 and 4 have R^2 more than 70%. According to Table 23, the minimum R^2 that a specified sample size will detect as statistically significant at the 0.05 significance level is 42%.

Table 23: Sample Size Statistical Power Test

	Significance Level (α)= 0.05 No. of Independent Variables			
Sample Size	**2**	**5**	**10**	**20**
20	39	48	64	NA
50	19	23	29	42
100	10	12	15	21
250	4	5	6	8
500	3	4	5	9
100	1	1	2	2

Source: Hair et al. (1995)
Note: Minimum R^2 that can be found statistically significant for varying numbers of independent variables and sample sizes.

5.4.3 Choice of Stepwise Regression for Sample 1

Multivariate testing is performed to test the relative influence of each independent variable when modeled together as determinants of a dependent variable. According to Singh and Newby (2010), multivariate testing not only tests the significance of the relationship between the independent and dependent variables but, more importantly it controls for the effects of a number of other independent variables on this relationship.

In stepwise multiple regression, the independent variables are entered according to their statistical contribution in explaining the variance in the dependent variable. Stepwise regression is used in Models 1, 2, 3 and 4 (sample 1) of this study because it reduces the number of independent variables in the model by excluding non-significant variables. This study has 6 independent variables and 11 control variables. Therefore, stepwise regression is considered the suitable choice of analysis by finding the set of predictors that are most effective in predicting the dependent variable. Given that Models 1, 2, 3 and 4 have a small sample size (36 respondents), it is essential to have a small number of independent variables entering into the model when analysis occurs. Since variables will not be added to the stepwise regression equation unless they make a statistically significant addition to the analysis, all of the independent variables selected for inclusion will have a statistically significant relationship to the dependent variable.

5.4.4 Model 1 and Model 2: Tests of Hypothesis One (a) and One (b)

5.4.4.1 Correlation Analysis

Table 24 reports the Pearson correlation coefficients for the variables used in Model 1 and Model 2. The correlation matrix in Table 24 shows high significant correlations between internal audit function labour hours (IAHOUR) and number of subsidiaries (SUB) (0.596), between internal audit function budget (IAFBUD) and number of subsidiaries (SUB) (0.595) and between internal audit function labour hours (IAHOUR) and internal audit function budget (IAFBUD) (0.994). These correlations are intuitively expected since they relate the size or diversity of internal audit tasks (i.e., number of subsidiaries) to the extent of internal audit resourcing (i.e., IAFBUD and IAHOUR). Additionally, Table 24 shows that some independent variables are significantly correlated with each other. However, these correlations do not necessarily indicate that multicollinearity will be a serious problem for stepwise regression analysis later.

The correlations of interest in Table 24 are those between the independent variables (i.e., AC's governance characteristics) and the dependent variables (IAFBUD and IAHOUR).The correlations between AC size (ACSIZE) with both internal audit function labour hours (IAHOUR) and internal audit function budget (IAFBUD) are statistically significant ($p < 0.05$). The inference is that the monetary and human resourcing of the internal audit function is dependent on the company having a larger AC.

Table 24: Correlation Analysis for Model 1 and Model 2

	AC CHAIR IND	AC EXP	AC INDUS	AC MEET	AC SIZE	AC CHAR	BIG 4	LNTA	LEVER AGE	REC RATIO	INVEN RATIO	CU RATIO	OP CASH	FOR SUB	SUB	LNAU D FEES	GROW TH	IA HOUR	IAF BUD
ACCHAIR IND	1.00																		
ACEXP	0.380*	1.00																	
ACINDUS	0.452**	0.196	1.00																
ACMEET	0.044	0.139	0.019	1.00															
ACSIZE	0.062	0.115	0.027	0.052	1.00														
ACCHAR	0.105	0.150	0.272	0.156	0.140	1.00													
BIG 4	0.106	0.182	0.047	0.246	0.164	0.041	1.00												
LNTA	0.190	0.210	0.239	0.196	0.474**	0.130	0.141	1.00											
LEVERAGE	0.168	0.254	0.160	0.044	0.003	0.342*	0.308*	0.228	1.00										
RECRATIO	0.142	0.008	0.178	0.105	0.411**	0.304*	0.096	0.478**	0.415**	1.00									
INVENRATIO	0.403**	0.266	0.478**	0.208	0.328*	0.200	0.481	0.202	0.358*	0.309*	1.00								
CURATIO	0.265	0.026	0.273	0.188	0.208	0.328*	0.200	0.481**	0.202	0.358*	0.309*	1.00							
OPCASH	0.548**	0.231	0.284*	0.309*	0.095	0.229	0.110	0.336*	0.279*	0.209	0.186	0.255	1.00						
FORSUB	0.245	0.040	0.088	0.021	0.097	0.059	0.227	0.054	0.151	0.349*	0.127	0.155	0.098	1.00					
SUB	0.031	0.063	0.012	0.152	0.189	0.031	0.276	0.394**	0.062	0.275	0.180	0.242	0.154	0.588**	1.00				
LNAUDFEES	0.166	0.332*	0.161	0.396**	0.305*	0.070	0.371*	0.633**	0.144	0.078	0.265	0.420**	0.149	0.316*	0.632**	1.00			
GROWTH	0.025	0.155	0.065	0.112	0.014	0.047	0.298*	0.236	0.062	0.013	0.058	0.116	0.318*	0.176	0.312*	0.174	1.00		
IAHOUR	0.032	0.257	0.112	0.180	0.440**	0.082	0.268	0.370*	0.077	0.101	0.029	0.273	0.051	0.255	0.596**	0.295*	0.258	1.00	
IAFBUD	0.004	0.229	0.101	0.174	0.451**	0.075	0.266	0.365*	0.071	0.089	0.046	0.252	0.052	0.262	0.595**	0.293*	0.262	0.994**	1.00

Note: ** Correlation is significant at the 0.01 level (1-tailed); * Correlation is significant at the 0.05 level (1-tailed)

5.4.4.2 Regression Analysis

Stepwise regression analysis is used to test hypotheses one (a) and one (b). In relation to the test of hypothesis one (a), the results for Model 1 are given in Table 25. Panel A of Table 25 shows the stepwise regression model summary. The model has a reasonable explanatory power of $R^2 = 0.473$, indicating that internal audit budget accounts for 47.3% of the variation in the model. The model is low in autocorrelation (Durbin-Watson= 2.434) which is significant at $p< 0.05$. Mutlicolinearity is not a concern as indicated by VIF and tolerance statistics (tolerance not below 0.5 and VIF not above 2) in Panel B of the table. The VIF and tolerance statistics indicate whether an independent variable has a strong relationship with the other independent variables.

Panel B of Table 25 presents the regression coefficients. Only ACSIZE (number of members serving on the AC) and SUB (square root of number of subsidiaries) are left in the model after stepwise regression excludes all non-significant independent variables. The coefficient for ACSIZE is positive and significant at 0.010 ($t= 2.726$, $p< 0.05$), indicating that the internal audit function budget is higher in companies where the AC has more members. Moreover, the coefficient for SUB (control variable) has a positive and significant ($t= 4.110$, $p< 0.05$) relationship with the internal audit function budget.

Interestingly, the extent of the internal audit function budget, which would reflect on its work effectiveness, is only impacted by the size of AC. Other AC characteristics do not have an impact, namely, independence of AC chair, financial expertise of AC, relevant industry experience of AC, frequency of meetings of AC and whether the AC has a charter. Hence, hypothesis one (a) is only minimally supported.

Table 25: **Stepwise Regression Results for Model 1**

PANEL A: Model Summary						
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**	**F-ratio**	**Sig.**
0.688	0.473	0.441	0.709	2.434	7.434	0.000

PANEL B: Regression Coefficients							
Dependent Variable	**Unstandardized coefficients**		**Standardized Coefficients**			**Collinearity Statistics**	
IAFBUD	**B**	**Std. Error**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Intercept	0.002	0.118		0.018	0.986		
Independent Variables							
ACSIZE	0.411	0.151	0.351	2.726	0.010	0.964	1.037
SUB	0.514	0.125	0.529	4.110	0.000	0.964	1.037

Note: ACCHAIRIND, ACEXP, ACINDUS, ACMEET, ACCHAR, BIG4, LNTA, LEVERAGE, RECRATIO, INVENRATIO, CURATIO, OPCASH, FORSUB, LNAUDFEES and GROWTH are not a significant predictor in this model.

Turning to the test of hypothesis one (b), regression results for Model 2 are shown in Table 26. Panel A indicates a high explanatory power (R^2= 0.531). The model is low in autocorrelation (Durbin-Watson= 2.447, p< 0.05). Mutlicolinearity is not a concern as indicated by VIF and Tolerance statistics in Panel B of table 26 (tolerance not below 0.5 and VIF not above 2).

The results in Panel B of Table 26 shows that ACEXP (number of AC members with accounting/financial qualifications to total AC members), ACSIZE (number of members serving on the AC) and SUB (square root of number of subsidiaries) are left in the model after stepwise regression excludes all non-significant variables. The coefficients for ACEXP and ACSIZE are positive and significant at 0.044 and 0.020 respectively (t= 2.101 and 2.456, p< 0.05), indicating that labour hours undertaken by the internal audit function are higher in companies where the AC has more accounting/financial experts and a larger number of members. The inference is a larger and more expert AC will generate a more effective internal audit function in terms of its business in hours worked. In addition, the coefficient for SUB (control variable in the model) is positively and significantly (t= 4.473, p< 0.05) related

to the internal audit function labour hours. Number of subsidiaries could be a proxy for the complexity of the internal audit function's tasks.

In summary, it is found that AC expertise and size significantly impact on the effectiveness of an AC in its role of overseeing the quality of the internal audit function. Other AC characteristics of chair independence, relevant industry experience, frequency of meetings and existence of a charter, do not impact on the quality of the internal audit function, as was the finding for Model 1. Hence, hypothesis one (b) is also partially supported.

Table 26: Stepwise Regression Results for Model 2

PANEL A: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F-ratio	Sig.
0.728	0.531	0.487	0.675	2.447	4.415	0.044

PANEL B: Regression Coefficients

Dependent Variable	**Unstandardized coefficients**		**Standardized Coefficients**			**Collinearity Statistics**	
IAHOUR	**B**	**Std. Error**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Intercept	0.001	0.113		0.013	0.990		
Independent Variables							
ACEXP	0.271	0.129	0.257	2.101	0.044	0.979	1.021
ACSIZE	0.355	0.145	0.306	2.456	0.020	0.948	1.055
SUB	0.535	0.210	0.554	4.473	0.000	0.957	1.045

Note: ACCHAIRIND, ACINDUS, ACMEET, ACCHAR, BIG4, LNTA, LEVERAGE, RECRATIO, INVENRATIO, CURATIO, OPCASH, FORSUB, LNAUDFEES and GROWTH are not a significant predictor in this model.

5.4.4.3 Discussion of Findings on Model 1 and Model 2

Both dependent variables, internal audit function budget and internal audit function labour hours used in Model 1 and Model 2 have captured whether an AC is effective in ensuring the firm's internal audit function is well resourced with funds and staff to perform its functions. The assumption is that the degree of resourcing of the internal audit function is largely in the hands of the AC in its capacity as the firm's oversight body for the quality of the internal audit function. The findings in Table 25 and Table 26 add limited support to Scarborough et

al. (1998), Raghunandan et al. (1998), Raghunandan et al. (2001), Goodwin (2003) and Abbott et al. (2010) who have concluded that an AC with better governance characteristics will improve the status of the internal audit function in a company.

In relation to Model 1, Table 25 shows that AC size, is the only independent variable that is positively and highly significantly related to the internal audit function budget which leads to partial acceptance of hypothesis one (a). This result suggests that a larger sized AC is likely to have more influence over the board of directors in advocating an adequate budget for the internal audit function. A larger AC may also have more time to work with the CIA and CFO in preparing a strong case for the internal audit function budget to be presented to the board.

Moreover, a larger AC can give greater attention to monitoring the internal audit function's funding needs and budget constraints. Such a commitment to reviewing the internal audit's on-going budgetary needs is likely to improve the resources allocated to the internal audit function. Carcello et al. (2005) found that the internal audit budget is higher when an AC reviews the internal audit budget. Raghunandan et al. (2001) also found that ACs that review the internal audit budget are associated with a larger budget for internal audit monitoring. Both studies have similar findings to this study. A further possibility is that the CIA can use the AC as a lever if the AC is larger and more powerful within the company when negotiating for extra funding within management, particularly during meetings with the management Abbott et al., 2010).

On the other hand, in relation to Model 2 concerning internal audit staff resourcing, the findings in Table 26 show that AC expertise and AC size are positively and highly significantly related to the internal audit function labour hours (IAHOUR). The inference from this result is that an AC with larger size and comprising of more members with accounting or financial qualifications will be able to bring more pressure on ensuring that labour hours allocated to the internal audit function are not compromised. In addition, AC members equipped with financial expertise are more likely to have a better understanding of the technicalities and complexities of internal audit tasks related to the company in a particular industry. Results of this study are supported by Goodwin's (2003) findings that found AC members with accounting expertise are more involved in reviewing the work of the internal audit function and ensuring that resources are allocated to the internal audit function.

During the review of the internal audit function budget and plan, larger size and financial experts AC members have the power to influence the board and management over, not only the amount of labour hours to be allocated to the internal control activities, but also the nature and scope of internal audit programs (Abbott et al., 2010). Furthermore, an AC with financial expertise is more likely to demand the internal audit function to act and to improve the existing internal control system or increase the amount of work to be done in higher risk areas (Carcello et al., 2005).

One of the responsibilities of the AC in a company is overseeing the internal audit function by ensuring that management has designed and implemented an effective internal control system (Raghunandan et al., 1998). To fulfil this role, an AC must have good corporate governance characteristics to ensure adequate budget and labour hours are allocated to the internal audit function. Raghunandan et al. (1998) found that good working relationships with the CIA can enhance the effectiveness of the AC. They argued that an AC which reviews the internal auditing program is more likely to be knowledgeable about accounting issues.

Based on the discussion above, it can be argued that AC size and AC expertise have an impact on the effectiveness of an AC's role in overseeing the quality of the internal audit function. The evidence indicates that AC size is more associated with the internal audit budget while both AC expertise and size are associated with the internal audit labour hours.

5.4.5 Model 3 and Model 4: Tests of Hypothesis Two (a) and Two (b)

5.4.5.1 Correlation Analysis

Table 27 reports the Pearson correlation coefficients for the variables used in Model 3 and Model 4. The correlation matrix in Table 27 reveals significant correlations of interest to Model 3 and Model 4. These are between the independent variables (AC's governance characteristics) and the dependent variables (IAFIND and AC_IAFIND).

The correlation between internal audit function independence (IAFIND) and AC size (ACSIZE) (0.258) and between AC support for internal audit function independence (AC_IAFIND) and AC size (ACSIZE) (0.207) are statistically significant at the $p< 0.05$ level. Although AC size does not display a high correlation with IAFIND and AC_IAFIND, it does imply that AC size has a significant influence on the dependent variables. While some of the independent variables are significantly correlated with each other, their correlations do not indicate that multicollinearity is a serious problem.

Table 27: Correlation Analysis for Model 3 and Model 4

	AC CHAIR IND	AC EXP	AC INDUS	AC MEET	AC SIZE	AC CHAR	BIG 4	LNTA	IAFIND	AC_ IAFIAND
ACCHAIR IND	1.00									
ACEXP	0.380*	1.00								
AC INDUS	0.452**	0.196	1.00							
AC MEET	0.044	0.139	0.019	1.00						
AC SIZE	0.062	0.115	0.027	0.052	1.00					
AC CHAR	0.105	0.150	0.272	0.156	0.140	1.00				
BIG 4	0.106	0.182	0.047	0.246	0.164	0.041	1.00			
LNTA	0.190	0.210	0.239	0.196	0.474**	0.130	0.141	1.00		
IAFIND	0.185	0.203	0.217	0.070	0.258*	0.042	0.186	0.104	1.00	
AC_ IAFIND	0.016	0.001	0.030	0.006	0.207*	0.188	0.326*	0.156	0.462**	1.00

Note: ** Correlation is significant at the 0.01 level (1-tailed); * Correlation is significant at the 0.05 level (1-tailed)

5.4.5.2 Regression Analysis

Stepwise regression analysis is used to test hypothesis two (a) and two (b) of this study. After running Models 3 and Model 4, the results of stepwise regression show that no variables are entered into either of the equations. In stepwise regression, the independent variables are entered according to their statistical contribution in explaining the variance in the dependent variable. Variables are added to the regression equation one at a time, using the statistical criterion of maximizing the R^2 of the included variables. This shows that the independent variables will not be added to the regression equation unless they make a statistically significant addition to the analysis. Hence, all of the independent variables (ACCHARIND, ACEXP, ACINDUS, ACMEET, ACSIZE and ACCHAR) and control variables (BIG4 and LNTA) have very little or no statistically significant relationship to the dependent variables (IAFIND and AC_IAFIND). The relationship between the dependent variables and independent variables are only justifiable in univariate analysis (correlation analysis) where AC size (ACSIZE) has a significant correlation with each of IAFIND and AC_IAFIND.

Since, there are no results generated from the stepwise regression for Model 3 and Model 4, both hypotheses two (a) and (b) are rejected. This result infers that there are no attributes of AC's governance characteristics that significantly impact on the effectiveness of an AC in its role of ensuring the independence of the internal audit function.

5.4.5.3 Discussion of Findings on Model 3 and Model 4

There are two possible reasons for this lack of any significant result. First, the two dependent variables internal audit function independence and AC support for internal audit function independence have been generated from a two-factor solution (see Table 17), when the 6 items in the questionnaire concerning the perceived degree of independence of the internal audit function are expected to load onto a single factor. Hence, the measures used for these two variables, one of which is based on two scales only, may lack content validity or reliability.

If these two dependent variables are of questionable statistical quality, then their application in Model 3 and Model 4 could be attributable to the poor result from these models. The poor relationships between the AC's governance characteristics variables and internal audit function independence variables are also evident in Table 27. In this table, only AC size is

significantly correlated to the dependent variables. An alternative measure of the concept of internal audit function independence might produce a more significant result for Model 3 and Model 4. For example, taking a cognitive perspective of internal auditor independence, Ahmad and Taylor (2009) developed measures for the concepts of commitment to independence, role conflict and role ambiguity in the context of the internal auditor's work environment.

Second, the specification of Models 3 and Model 4 may be the reason for the lack of a significant result. In other words, the AC's governance characteristics could, in fact, have quite minimal explanatory power as determinants of the extent of independence of the internal audit function. Other factors, not included in the specification of Model 3 and Model 4, such as the demands and values of senior management in the company, or the pressures from professional bodies like the IIA Australia, could be the more dominant influences on shaping the independent of internal audit staff.

5.4.6 Model 4 and Model 5: Tests of Hypothesis Three and Hypothesis Four

5.4.6.1 Correlation Analysis

Table 28 reports the Pearson correlation coefficients for the variables used in the Model 5 and Model 6. This table shows several significant correlations. The variables significantly correlated to the natural log of audit fees (LNAUDFEES) worthy of noting are: AC meetings (ACMEET) (0.560); natural log of non-audit fees (LNNONAUDFEES) (0.650); the number of subsidiaries (SUB) (0.677); and the natural log of total assets (LNTA) (0.813).

Table 28: Correlation Analysis for Model 5 and Model 6

	AC CHAIR IND	AC EXP	AC INDUS	AC MEET	AC SIZE	AC CHAR	BOD IND	BOD MEET	BIG4	MINING	LOSS	ROA	INVEN RATIO	REC RATIO	DEBT RATIO	FOR SUB	SUB	LN AUD FEES	LN NON AUD FEES	LN TA
ACCHAIR IND	1.00																			
ACEXP	0.241**	1.00																		
ACINDUS	0.149**	0.105*	1.00																	
ACMEET	0.010	0.198**	0.090	1.00																
ACSIZE	0.009	0.091	0.235**	0.290**	1.00															
ACCHAR	0.079	0.098	0.113*	0.033	0.109*	1.00														
BODIND	0.122*	0.110*	0.192**	0.269**	0.232**	0.117*	1.00													
BODMEET	0.053	0.070	0.028	0.134*	0.022	0.195**	0.036	1.00												
BIG4	0.023	0.131*	0.092	0.268**	0.221**	0.160**	0.285**	0.153**	1.00											
MINING	-0.069	-0.194**	-0.168**	-0.189**	-0.132*	-0.004	-0.139*	-0.060	-0.188**	1.00										
LOSS	0.067	0.155**	0.208**	0.181**	0.173**	0.094	0.129*	0.059	0.342**	0.342**	1.00									
ROA	0.192**	0.111*	0.248**	0.124*	0.089	0.070	0.013	0.039	0.230**	-0.230**	-0.479**	1.00								
INVEN RATIO	0.235	0.009	0.303	0.026	0.203	0.064	0.065	0.037	0.150	-0.105	-0.233	0.326	1.00							
REC RATIO	0.235**	0.064	0.231**	0.148**	0.088	0.062	0.029	0.022	0.150**	-0.325**	-0.397**	0.461**	0.431**	1.00						
DEBT RATIO	0.051	0.041	0.080	0.209**	0.062	0.148**	0.049	0.048	0.114*	-0.149**	-0.080	0.142*	0.072	-0.216**	1.00					
FORSUB	0.207**	0.072	0.011	0.107*	0.021	0.042	0.015	0.027	0.019	-0.002	-0.068	0.063	0.061	0.156**	0.045	1.00				
SUB	0.005	0.131*	0.222**	0.433**	0.309**	0.100	0.285**	0.063	0.305**	-0.381**	-0.272**	0.178**	0.233**	0.372**	0.134*	0.262**	1.00			
LNAUDFEES	0.046	0.189**	0.199**	0.560**	0.443**	0.096	0.365**	0.023	0.447**	-0.321**	0.328**	-0.229**	0.218**	0.288**	0.252**	0.253**	0.677**	1.00		
LNNON AUDFEES	-0.060	-0.175**	-0.102	-0.403**	-0.380**	-0.102	-0.319**	-0.036	0.408**	-0.195**	0.198**	-0.112*	0.152	0.190**	0.166**	0.118*	0.483**	0.650**	1.00	
LNTA	0.104	0.204**	0.148*	0.538**	0.469	0.149*	0.430**	0.007	0.402**	-0.303**	-0.269**	0.144*	0.153*	0.122	0.218**	0.058	0.674**	0.813**	0.651**	1.00

Note: ** Correlation is significant at the 0.01 level (1-tailed); * Correlation is significant at the 0.05 level (1-tailed)

5.4.6.2 Comparisons of Means

An independent samples t-test is performed for the AC continuous variables to determine whether ACs that follow the ASX CGC's principles and recommendations are significantly different in terms of audit and non-audit fees from those that do not follow the guidelines. The ASX CGC requires an AC to be chaired by an independent chair (who is not chair of the board), has at least one member who has relevant qualifications and experience, has some members who have an understanding of the industry in which the entity operates, has at least 3 members on the committee and should meet at least four times annually.

Review of Table 29 shows many of these significant differences. On average, ACs that follow the ASX CGC recommendations have higher mean audit fees and lower mean non-audit fees compared to firms that do not follow the guidelines. ACs that adhere to the ASX CGC recommendations are more likely to demand a greater level of audit assurance by accepting higher audit fees and reducing the level of non-audit service fees for consulting services provided by the external auditor firm to the management.

The mean differences are significant ($p < 0.05$) in Table 29 for all the groups except for the independence of AC chair. The mean of the independence of AC chair is not significantly different between ACs that follow the ASX CGC recommendations and the ACs that do not follow the guidelines. It can be argued that an AC chair is often a non-executive director of the company but could still have a substantial relationship with the company as a customer, a supplier or a professional advisor or there is some other matter that compromises that person's independence. This appears to be reflected in the finding of a non-significant difference between the means of the independence of AC chair

In summary, the results in Table 29 show that:

i) Companies with higher audit fees (a proxy for higher quality of external audit) are characterized as having an AC with significantly greater financial expertise, greater industry experience, meet more frequently and are larger in size.
ii) Companies with higher non-audit fees (a proxy for weaker auditor independence) are characterized as having an AC with significantly lower financial expertise, lower industry experience, and meet less frequently and are smaller in size.

iii) Companies that have an apparently higher quality of external audit and external auditors' independence are more in conformity with ASX CGC guidelines.

This conclusion implies that ACs with higher quality of governance structures will be more effective in fulfilling their role of maintaining the quality of the external audit function and ensuring the independence of external auditors.

Table 29: Comparison of Means

Variable Name	Group	Mean Score	Difference between means	t-value	Sig.
Audit Fees					
LN AUDFEES	ACCHAIRIND ≥ 0.50% of the chairs are independent	13.340	0.129	-0.517	0.303
	ACCHAIRIND < 0.50% of the chairs are independent	13.211			
LN AUDFEES	ACEXP ≥ 2 members have financial expertise	13.547	0.992	5.846	0.000
	ACEXP < 2 members have financial expertise	12.539			
LN AUDFEES	ACINDUS ≥ 2 members have 10 years industry experience	13.270	0.070	3.760	0.035
	ACINDUS < 2 members have 10 years industry experience	13.200			
LN AUDFEES	ACMEET ≥ 4 meetings held a year	13.816	1.490	9.143	0.000
	ACMEET < 4 meetings held a year	12.326			
LN AUDFEES	ACSIZE ≥ 3 members in the committee	13.330	1.791	7.737	0.000
	ACSIZE < 3 members in the committee	11.539			
Non-Audit Fees					
LNNON AUDFEES	ACCHAIRIND ≥ 0.50% of the chairs are independent	10.648	0.446	-0.598	0.275
	ACCHAIRIND < 0.50% of the chairs are independent	11.094			
LNNON AUDFEES	ACEXP ≥ 2 members have financial expertise	9.204	2.196	3.450	0.001
	ACEXP < 2 members have financial expertise	11.400			
LNNON AUDFEES	ACINDUS ≥ 2 members have 10 years industry experience	10.695	0.054	9.700	0.046
	ACINDUS < 2 members have 10 years industry experience	10.749			
LNNON AUDFEES	ACMEET ≥ 4 meetings held a year	8.893	3.005	5.275	0.000
	ACMEET < 4 meetings held a year	11.898			
LNNON AUDFEES	ACSIZE ≥ 3 members in the committee	8.886	1.940	1.619	0.045
	ACSIZE < 3 members in the committee	10.826			

5.4.6.3 Regression Analysis

The findings of the univariate analysis shows that a number of AC's governance variables (both continuous and dichotomous variables) have statistically significant relationships with the dependent variables (audit fees and non-audit fees). In spite of this, it is important to perform multivariate testing because it will test the relative influence of each independent variable when modeled together as determinants of a dependent variable. According to Singh and Newby (2010), multivariate testing not only tests the significance of the relationship between the experimental variable and the dependent variable but, more importantly it controls for the effects of a number of other independent variables on this relationship. Ordinary least squares multiple regression models will be used to test hypothesis three and hypothesis four of this study.

5.4.6.3.1 Results for Model 5 (The Effects of Control Variables on Audit Fees)

Table 30 shows the ordinary least squares regression results for the effects of company-specific control variables on audit fees. In order to test the validity of the Model 5 used in this study, the traditional audit fees model (Simunic, 1980; Francis, 1984; Francis and Simon, 1987; Craswell and Francis, 1999) is used. In this traditional audit fees model the natural log of audit fees is regressed on the control variables. Studies have found audit fees to be related to firm size, complexity, audit risk of the client firm, profitability, the use of Big 4 audit firm and industry (Simunic, 1980; Francis, 1984; Craswell and Francis, 1999; Abbott et al., 2003; Goodwin and Kent, 2006; Hoitash and Hoitash, 2009; Singh and Newby, 2010).

Panel A of Table 30 presents the regression model summary. The model has a high explanatory power. $R^2 = 0.756$ shows that audit fees accounts for 75.6% of the variation in the model. Adjusted $R^2 = 0.743$, F-ratio= 62.334 and the model is low in autocorrelation (Durbin-Watson= 2.019) which is significant at $p< 0.05$. To test the problem of mutlicolinearity, variance inflation factor (VIF) and tolerance statistics are calculated and presented in Table 30, Panel B. Mutlicolinearity is not a concern as indicated by VIF and tolerance statistics (tolerance not below 0.5 and VIF not above 2).

Results in Panel B of Table 30 present the regression coefficients. Following previous studies, the coefficients for BIG4 (whether a firm uses Big Four audit firms), DEBTRATIO (ratio of non-current liabilities to total assets), FORSUB (ratio of number of foreign subsidiaries to

total number of subsidiaries), SUB (square root of number of subsidiaries) and LNTA (natural log of total assets) are all positively related to audit fees and are significant ($p < 0.05$). By comparison, the remaining five coefficients estimate, MINING (whether a firm is in the mining industry), LOSS (whether a firm has reported a loss), ROA (ratio of earnings before interest and tax to total assets), INVENRATIO (ratio of inventory to total assets) and RECRATIO (ratio of receivables to total assets) are in the predicted direction but not significant in explaining audit fees. These variables found not to be significant in this study have mixed results in the previous studies, with some finding significance and others are not (Abbott et al., 2003; Goodwin and Kent, 2006; Hoitash and Hoitash, 2009; Singh and Newby, 2010).

In terms of board characteristics, the coefficient estimates for BODIND (ratio of non-executive directors on the board to total number board of directors) and BODMEET (number of board meetings held during the year) are not significantly related to audit fees. This result is consistent with a newer study (Hoitash and Hoitash, 2009) that found that characteristics of the board of the directors are not associated with audit fees. However, the results of this study and Hoitash and Hoitash (2009) are in contrast to the findings of Carello et al. (2002), Abbott et al. (2003) and Goodwin and Kent (2006). It can be argued, there are a number of possible reasons for the differences between the results.

Firstly, since ASX CGC *Principles of Good Corporate Governance and Best Practice Recommendations* are introduced in 2003, it became the minimum standard for firm corporate governance performance in Australia. Under the recommendations, companies have a choice to follow and implement any new corporate governance strategies or mechanisms. However, companies wanting to distinguish themselves from other companies may choose to signal their corporate governance performance by using other corporate governance mechanisms which are not compulsory under the recommendations of the ASX CGC (Singh and Newby, 2009). Thus, this could the reason that BODIND and BODMEET variables have changed from being significant to non-significant variables in explaining the audit fees. Furthermore, it can also be posited that the lack of association between the board of directors' independence and meetings is consistent with the increased oversight and responsibilities of the AC with respect to audit fees. This result indicates that ASX CGC

achieved its objective with regard to the monitoring oversight of the external auditors by re-positioning this oversight from the board of directors to the AC.

Table 30: Ordinary Least Squares Regression Results Model 5 (The Effects of Control Variables on Audit Fees)

PANEL A: Model Summary						
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**	**F-ratio**	**Sig.**
0.869	0.756	0.743	0.504	2.019	62.334	0.000

PANEL B: Regression Coefficients							
Dependent Variable	**Unstandardized coefficients**		**Standardized Coefficients**			**Collinearity Statistics**	
LNAUDFEES	**B**	**Std. Error**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Intercept	0.005	0.032		0.143	0.886		
Independent Variables							
BODIND	0.009	0.036	0.009	0.238	0.812	0.785	1.274
BODMEET	0.040	0.033	0.40	1.208	0.228	0.937	1.067
BIG4	0.224	0.062	0.131	3.630	0.000	0.779	1.284
MINING	-0.016	0.058	-0.010	-0.276	0.783	0.751	1.332
LOSS	0.075	0.057	0.051	1.302	0.194	0.664	1.506
ROA	-0.022	0.039	-0.022	-0.565	0.573	0.654	1.528
INVENRATIO	0.021	0.040	0.020	0.530	0.597	0.733	1.363
RECRATIO	0.075	0.046	0.071	1.635	0.103	0.529	1.889
DEBTRATIO	0.071	0.036	0.069	1.988	0.048	0.844	1.185
FORSUB	0.189	0.036	0.175	5.177	0.000	0.884	1.131
SUB	0.097	0.051	0.096	1.904	0.058	0.501	1.499
LNTA	0.636	0.050	0.636	12.616	0.000	0.598	1.512

Note: LNAUDFEES is total audit fees are collected from the company annual reports and are then transformed into natural log; BODIND is ratio of non-executive directors on the board to total number board of directors; BODMEET is number of board meetings held during the year; BIG4 is equal to the value of "1" if a Big 4 auditor is used and "0" when a smaller audit firm is used; MINING is equal to the value of "1" when the company is in the mining industry, "0" otherwise; LOSS is equal to the value of "1" if the company has reported a loss in any of the three years prior to, "0" otherwise; ROA is ratio of earnings before interest and tax to total assets; INVENRATIO is ratio of inventory to total assets; RECRATIO is ratio of receivables to total assets; DEBTRATIO is ratio of non-current liabilities to total assets; FORSUB is ratio of number of foreign subsidiaries to total number of subsidiaries; SUB is square root of total number of subsidiaries; LNTA is natural log of total assets (in millions).

5.4.6.3.2 Results for Model 5 (The Effects of AC Variables on Audit Fees)

Panel A of Table 31 shows that the model has a high explanatory power. $R^2 = 0.772$ explains that audit fees accounts for 77.2% of the variation in the model. Adjusted $R^2 = 0.755$, F-ratio= 30.147 and the model is low in autocorrelation (Durbin-Watson= 1.909) which is significant. Mutlicolinearity is not a concern as tolerance statistics is not below 0.5 and VIF is not above 2 (shown in Panel B).

In addition, results in Panel B of Table 31 present the regression coefficients. The coefficient for ACMEET (number of AC meetings held during the financial year) and AC SIZE (number of members serving on the AC during the financial year are positive and significant at 0.004 and 0.039 respectively (t= 2.870 and 2.081, $p< 0.05$), indicating that audit fees are higher in companies where the AC has more number of meetings held and larger number of members serving on the committee. Whereas, the coefficients for ACCHAIRIND (ratio of scores assigned to each of the two criteria for AC chair independence), ACEXP (ratio of number of AC members with accounting/financial qualifications to total AC members.), ACINDUS (ratio of number of AC members who has worked in the same industry for a substantial number of years to total AC members) and ACCHAR (whether the firm has an AC charter) are positive but not significantly ($p> 0.05$) associated with the level of audit fees (t= 1.672, t= 0.412, t= 0.609, t= 0.099, respectively).

Considering these results, the only attributes of AC's governance characteristics that significantly impacts on the effectiveness of AC in its role of facilitating the quality of external audit are size and frequency of meetings while other AC characteristics do not have an impact, namely, the independence of AC chair, financial and industry expertise of AC and whether AC has a charter Hence, hypothesis three is partially supported.

Table 31: Ordinary Least Squares Regression Results Model 5 (The Effects of AC Variables on Audit Fees)

PANEL A: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F-ratio	Sig.
0.879	0.772	0.755	0.493	1.909	30.147	0.000

PANEL B: Regression Coefficients

Dependent Variable	Unstandardized coefficients		Standardized Coefficients			Collinearity Statistics	
LNAUDFEES	B	Std. Error	Beta	t-value	Sig.	Tolerance	VIF
Intercept	0.001	0.031		0.024	0.000		
Independent Variables							
ACCHAIRIND	0.065	0.039	0.059	1.672	0.096	0.779	1.284
ACEXP	0.016	0.038	0.014	0.412	0.681	0.791	1.264
ACINDUS	0.023	0.038	0.021	0.609	0.543	0.775	1.291
ACMEET	0.116	0.040	0.111	2.870	0.004	0.640	1.562
ACSIZE	0.092	0.044	0.078	2.081	0.039	0.683	1.464
ACCHAR	0.006	0.059	0.003	0.099	0.921	0.847	1.181
Control Variables							
BODIND	0.006	0.036	0.006	0.173	0.863	0.754	1.327
BODMEET	0.022	0.034	0.022	0.644	0.520	0.862	1.161
BIG4	0.205	0.061	0.120	3.365	0.001	0.764	1.309
MINING	-0.006	0.057	-0.004	-0.111	0.912	0.733	1.364
LOSS	0.061	0.057	0.042	1.080	0.281	0.646	1.548
ROA	-0.022	0.039	-0.022	-0.567	0.572	0.637	1.569
INVENRATIO	0.032	0.041	0.029	0.764	0.445	0.663	1.508
RECRATIO	0.076	0.045	0.073	1.688	0.093	0.521	1.918
DEBTRATIO	0.069	0.036	0.067	1.931	0.050	0.807	1.240
FORSUB	0.200	0.037	0.185	5.463	0.000	0.839	1.192
SUB	0.085	0.050	0.085	1.703	0.009	0.591	1.560
LNTA	0.548	0.055	0.548	9.951	0.000	0.518	1.143

Note: LNAUDFEES is total audit fees are collected from the company annual reports and are then transformed into natural log; ACCHAIRIND is ratio of total scores assigned to each of the two criteria for AC chair independence; ACEXP is ratio of number of AC members with accounting/financial qualifications to total AC members; ACINDUS is ratio of number of AC members who has worked in the same industry for a substantial number of years (at least 10 years) to total AC members; ACMEET is number of AC meetings held during the financial year; ACSIZE is number of members serving on the AC during the financial year; ACCHAR is equal to the value of "1" if AC has a charter and "0" otherwise;BODIND is ratio of non-executive directors on the board to total number board of directors; BODMEET is number of board meetings held during the year; BIG4 is equal to the value of "1" if a Big 4 auditor is used and "0" when a smaller audit firm is used; MINING is equal to the value of "1" when the company is in the mining industry, "0" otherwise; LOSS is equal to the value of "1" if the company has reported a loss in any of the three years prior to, "0" otherwise; ROA is ratio of earnings before interest and tax to total assets; INVENRATIO is ratio of inventory to total assets; RECRATIO is ratio of receivables to total assets; DEBTRATIO is ratio of non-current liabilities to total assets; FORSUB is ratio of number of foreign subsidiaries to total number of subsidiaries; SUB is square root of total number of subsidiaries; LNTA is natural log of total assets (in millions).

5.4.6.3.3 Discussion of Findings on Model 5

Previous studies have shown that AC frequency of meetings and AC size are good measures of AC effectiveness in fulfilling its role. The findings in Table 31 support Carello et al. (2002), Goodwin and Kent (2006), Yatim et al. (2006) and Hoitash and Hoitash (2009) that found audit fees to be significantly related to frequency of meetings and size. The phenomenon underlying this result could be that ACs who meet frequently with the external auditors and management are more likely to be informed about the auditing issues and subsequently demand higher quality of external audits by increasing the audit fees. Moreover, larger AC has more power to increase the quality of external audit by discovering and solving potential risks in the financial reporting process.

Goodwin and Kent (2006), Yatim et al. (2006) and Singh and Newby (2010) found that audit fees are not significantly associated with AC independence. These results are in contrast to Carello et al. (2002) and Abbott et al. (2003) that reported a significant positive association between higher external audit fees and AC independence. These contrasting findings could be due to the regulatory corporate governance changes in the United States which have caused greater AC oversight and have increased the level of disclosure relating to AC roles and responsibilities. These regulatory changes could have instigated companies to reinforce AC independence in ensuring the quality of the external audit.

Unlike other literature, this study examines the relationship between the independence of the AC chair to audit fees (instead of the members' independence). The reason for not applying the latter is that all the top 300 ASX listed companies in Australia will display the same extent of non-executive director independence across the committee members. The chair of the AC plays an important role in influencing the agenda of the committee and the chair needs to have independence for the AC to have credibility. Therefore, it is important to examine this association.

The result of this study shows that the independence of AC chair is positive but not significantly related with the level of audit fees. It can be argued that the enhanced requirement by the ASX CGC which requires the AC to be chaired by an independent chair that is not chair of the board of directors could probably cause a lack of association between AC chair independence and audit fees. Further, the measure of independence in this study

may not be a good indicator to capture the association between chair independence and audit fees because an AC chair is often a non-executive director of the firm but could still have a substantial relationship with the company that hinders their independence.

The findings in Table 31 reveal that AC financial expertise and AC industry expertise are not significantly related to audit fees. However, Abbott et al. (2003), Yatim et al. (2006) and Hoitash and Hoitash (2009) reported a significant positive association between audit fees and AC expertise. It can be argued that the findings in the previous studies differ from this study due to sample size. Abbott et al. (2003) and Hoitash and Hoitash (2009) conducted their studies in the United States. The sample of this study is comprised of large Australian companies (ASX top 300) and even the large companies are considered small by the United States standards (Holland and Ramsay, 2003). Moreover, another possible argument might be that some Australian companies may have difficulty assigning independent directors with suitable expertise and industry experience to be the members of the AC. As a result, this could probably cause the relationship between AC expertise and industry with audit fees to be insignificant.

Furthermore, the findings of this study show that AC charter is not significantly related to audit fees. The association between AC charter and audit fees is new to the literature and this study is the first to examine this association. According to ASX CGC (2007) Recommendations 4.3, a firm should have a formal AC charter. An AC charter shows the composition of the committee, responsibilities and its basic framework. The enhanced requirements could possibly cause a lack of relationship between the AC charter and audit fees. To balance this argument, it is found that out of 255 companies sampled in this study, only 34 companies do not have an AC formal charter.

In conclusion, the results of this study only show that AC meetings and size are associated with audit fees while the rest of the four variables are insignificant. AC frequency of meetings and AC size definitely plays a larger role in facilitating the quality of external audit in Australian companies.

5.4.6.3.4 Results for Model 6 (The Effects of Control Variables on Non-Audit Fees)

Table 32 shows the regression results for the effects of company-specific control variables on non-audit fees. Panel A of Table 32 shows that the model has a reasonable explanatory power. R^2= 0.467 explains that non-audit fees accounts for 46.7% of the variation in the model. Adjusted R^2= 0.440, F-ratio= 17.635 and the model is low in autocorrelation. Mutlicolinearity is not a concern as indicated by VIF and tolerance statistics presented in Table 32, Panel B (tolerance not below 0.5 and VIF not above 2).

Results in Panel B of Table 32 present the regression coefficients. The coefficients for BIG4 (whether a firm uses Big Four audit firms) and LNTA (natural log of total assets) are positively related to non-audit fees and are significant ($p< 0.05$). DEBTRATIO (ratio of non-current liabilities to total assets), FORSUB (ratio of number of foreign subsidiaries to total number of subsidiaries), SUB (square root of number of subsidiaries), LOSS (whether a firm has reported a loss), INVENRATIO (ratio of inventory to total assets) and RECRATIO (ratio of receivables to total assets) are in the predicted direction but not significant in explaining non-audit fees.

Alternatively, the remaining two coefficients estimate, MINING (whether a firm is in the mining industry) and ROA (ratio of earnings before interest and tax to total assets) is negatively related but not significant in explaining non-audit fees too. In terms of board characteristics, the coefficient estimates for BODIND (ratio of non-executive directors on the board to total number board of directors) and BODMEET (number of board meetings held during the year) are in predicted signs but not significantly related to non-audit fees.

Table 32: Ordinary Least Squares Regression Results Model 6 (The Effects of Control Variables on Non-Audit Fees)

PANEL A: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	F-ratio	Sig.
0.683	0.467	0.440	0.720	1.885	17.635	0.000

PANEL B: Regression Coefficients

Dependent Variable	**Unstandardized coefficients**		**Standardized Coefficients**			**Collinearity Statistics**	
LNNON AUDFEES	**B**	**Std. Error**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Intercept	0.020	0.046		0.435	0.664		
Control Variables							
BODIND	-0.029	0.052	-0.029	-0.551	0.582	0.785	1.274
BODMEET	-0.018	0.047	-0.018	-0.372	0.710	0.937	1.067
BIG4	0.263	0.088	0.159	2.983	0.003	0.779	1.284
MINING	-0.069	0.083	-0.045	-0.828	0.408	0.751	1.332
LOSS	0.000	0.082	0.000	0.004	0.997	0.664	1.506
ROA	-0.034	0.056	-0.035	-0.604	0.547	0.654	1.528
INVENRATIO	0.005	0.057	0.005	0.086	0.932	0.733	1.363
RECRATIO	0.110	0.066	0.108	1.677	0.095	0.529	1.889
DEBTRATIO	0.014	0.051	0.014	0.276	0.783	0.844	1.185
FORSUB	0.067	0.052	0.064	1.290	0.198	0.884	1.131
SUB	0.008	0.073	0.008	0.108	0.914	0.500	1.499
LNTA	0.549	0.072	0.567	7.625	0.000	0.598	1.512

Note: LNNONAUDFEES is total fees paid for non-audit services divided by the total fees paid to the auditors and are then transformed into natural log; BODIND is ratio of non-executive directors on the board to total number board of directors; BODMEET is number of board meetings held during the year; BIG4 is equal to the value of "1" if a Big 4 auditor is used and "0" when a smaller audit firm is used; MINING is equal to the value of "1" when the company is in the mining industry, "0" otherwise; LOSS is equal to the value of "1" if the company has reported a loss in any of the three years prior to, "0" otherwise; ROA is ratio of earnings before interest and tax to total assets; INVENRATIO is ratio of inventory to total assets; RECRATIO is ratio of receivables to total assets; DEBTRATIO is ratio of non-current liabilities to total assets; FORSUB is ratio of number of foreign subsidiaries to total number of subsidiaries; SUB is square root of total number of subsidiaries; LNTA is natural log of total assets (in millions).

5.4.6.3.5 Results for Model 6 (The Effects of AC Variables on Non-Audit Fees)

Panel A of Table 33 shows that the model has a reasonable explanatory power. $R^2 = 0.480$ explains that non-audit fees accounts for 48.0% of the variation in the model. Adjusted $R^2 = 0.440$, F-ratio= 8.287 and the model is low in autocorrelation (Durbin-Watson = 1.890) which is significant at $p< 0.05$. Mutlicolinearity is not a concern as indicated by VIF and tolerance statistics (tolerance not below 0.5 and VIF not above 2).

Results in Panel B of Table 33 present the regression coefficients. The coefficient for ACMEET (number of AC meetings held during the financial year) and AC SIZE (number of members serving on the AC during the financial year) are negatively related to non-audit fees and are significant at 0.050 and 0.049 respectively (t= -0.599 and -1.983, $p< 0.05$), indicating that non-audit fees are lower in firms where the AC has more number of meetings held and larger number of members serving on the committee.

By comparison, the coefficients for ACCHAIRIND (ratio of scores assigned to each of the two criteria for AC chair independence), ACEXP (ratio of number of AC members with accounting/financial qualifications to total AC members.), ACINDUS (ratio of number of AC members who has worked in the same industry for a substantial number of years to total AC members) and ACCHAR (whether the firm has an AC charter) are negative but not significantly ($p> 0.05$) associated with the level of non-audit fees (t= -0.491, t= -1.283, t= -0.714, t= -0.0281, respectively).

Of all the six AC's governance characteristics that significantly impact on the effectiveness of ACs in their role of ensuring independence of the external auditors, only AC size and AC frequency of meetings have an impact. Hence, hypothesis four is also partially supported.

Table 33: Ordinary Least Squares Regression Results Model 6 (The Effects of AC Variables on Non-Audit Fees)

PANEL A: Model Summary						
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**	**F-ratio**	**Sig.**
0.693	0.480	0.440	0.720	1.890	8.287	0.000

PANEL B: Regression Coefficients							
Dependent Variable	**Unstandardized coefficients**		**Standardized Coefficients**			**Collinearity Statistics**	
LNNON AUDFEES	**B**	**Std. Error**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Constant	0.013	0.046		0.292	0.770		
Independent Variables							
ACCHAIRIND	-0.028	0.057	-0.026	-0.491	0.624	0.779	1.284
ACEXP	-0.071	0.055	-0.068	-1.283	0.201	0.791	1.264
ACINDUS	-0.039	0.055	-0.038	-0.714	0.476	0.775	1.291
ACMEET	-0.035	0.059	-0.035	-0.599	0.050	0.640	1.562
ACSIZE	-0.128	0.065	-0.113	-1.983	0.049	0.683	1.464
ACCHAR	-0.024	0.087	-0.014	-0.0281	0.779	0.847	1.181
Control Variables							
BODIND	-0.029	0.053	-0.029	-0.543	0.588	0.754	1.327
BODMEET	-0.032	0.049	-0.033	-0.653	0.515	0.862	1.161
BIG4	0.246	0.089	0.148	2.762	0.006	0.764	1.309
MINING	-0.079	0.084	-0.052	-0.945	0.346	0.733	1.364
LOSS	0.017	0.083	0.012	0.200	0.842	0.646	1.548
ROA	-0.029	0.057	-0.030	-0.513	0.608	0.637	1.569
INVENRATIO	0.013	0.060	0.013	0.222	0.824	0.663	1.508
RECRATIO	0.111	0.066	0.109	1.671	0.096	0.521	1.918
DEBTRATIO	0.020	0.052	0.020	0.381	0.704	0.807	1.240
FORSUB	0.079	0.054	0.075	1.472	0.142	0.839	1.192
SUB	0.017	0.073	0.017	0.227	0.821	0.591	1.560
LNTA	0.471	0.081	0.486	5.843	0.000	0.518	1.143

Note: LNNONAUDFEES is total fees paid for non-audit services divided by the total fees paid to the auditors and are then transformed into natural log; ACCHAIRIND is ratio of total scores assigned to each of the two criteria for AC chair independence; ACEXP is ratio of number of AC members with accounting/financial qualifications to total AC members; ACINDUS is ratio of number of AC members who has worked in the same industry for a substantial number of years (at least 10 years) to total AC members; ACMEET is number of AC meetings held during the financial year; ACSIZE is number of members serving on the AC during the financial year; ACCHAR is equal to the value of "1" if AC has a charter and "0" otherwise;BODIND is ratio of non-executive directors on the board to total number board of directors; BODMEET is number of board meetings held during the year; BIG4 is equal to the value of "1" if a Big 4 auditor is used and "0" when a smaller audit firm is used; MINING is equal to the value of "1" when the company is in the mining industry, "0" otherwise; LOSS is equal to the value of "1" if the company has reported a loss in any of the three years prior to, "0" otherwise; ROA is ratio of earnings before interest and tax to total assets; INVENRATIO is ratio of inventory to total assets; RECRATIO is ratio of receivables to total assets; DEBTRATIO is ratio of non-current liabilities to total assets; FORSUB is ratio of number of foreign subsidiaries to total number of subsidiaries; SUB is square root of total number of subsidiaries; LNTA is natural log of total assets (in millions).

5.4.6.3.6 Discussion of Findings on Model 6

To this date only four studies examined the association between AC characteristics and non-audit fees (Abbott et al., 2003; Hoitash and Hoitash, 2009; Lary and Taylor, 2011; Zaman et al., 2011). Abbott et al. (2003) found that ACs comprised solely of independent directors and meet at least four times annually, are significantly and negatively associated with the non-audit service fees ratio. Similarly, in the post SOX period, Hoitash and Hoitash (2009) also found that strong ACs lead to a smaller proportion of non audit fess with respect to total fees.

In summarizing the effects of AC characteristics on the independence of the external audit function, the findings of this study show that higher AC frequency of meetings and AC size significantly improve external auditor independence (as proxied by the lower non-audit fee ratio). These results are consistent with those observed by Abbott et al. (2003), Hoitash and Hoitash (2009) and Lary and Taylor (2011). It could be argued that ACs with more meetings and larger size are in a better position to demand higher quality of external auditors by ensuring a higher company budget allocated for audit service fees. Thus, higher audit service fees would be likely to drive the non-audit fees ratio down. Moreover, stronger ACs (more meetings and members) might be reluctant to authorize non-audit service fees provided by the external auditors to the management in an attempt to increase external auditors' independence.

In conclusion, the result of this study shows that AC frequency of meetings and AC size are associated with non-audit fees while the rest of the four variables are insignificant. AC frequency of meetings and AC size definitely play a larger role in ensuring the independence of external auditors in Australian companies.

5.4.7 Model 6: Tests of Hypothesis Five

5.4.7.1 Correlation Analysis

Table 34 reports the Pearson correlation coefficients for the variables used in the Model 7 (audit-related agency monitoring costs and total shareholders return). The correlation matrix table shows that total shareholders return (TSR) and AC fees ratio (ACFEESRATIO) has a reasonable strong positive correlation (0.328) and is significant at $p< 0.05$. By comparison, external audit fees ratio (AUDFEESRATIO) and internal audit function budget ratio (IAFBUDRATIO) have a weak negative relationship with the dependent variable of this

study (TSR). Further multivariate analysis need to be performed in order to test the strength and association of these relationships.

Table 34: Correlation Analysis for Model 7

	TSR	ACFEES RATIO	AUDFEES RATIO	IAFBUD RATIO
TSR	1.00			
ACFEES RATIO	0.328*	1.00		
AUDFEES RATIO	-0.179	0.123	1.00	
IAFBUD RATIO	-0.287*	-0.049	0.821**	1.00

Note: ** Correlation is significant at the 0.01 level (1-tailed); * Correlation is at the 0.05evel (1-tailed)

5.4.7.2 Regression Analysis

Ordinary least squares regression is used in Model 7 instead of stepwise regression. Although this model uses a sample size (n= 36), there are only three variables in the model. Thus, it is acceptable to run ordinary least squares regression to test hypothesis five of this study.

5.4.7.2.1 Results for Model 7

Table 35 shows regression results for the effects of audit-related agency monitoring costs on total shareholders return. The model has a low explanatory power. $R^2 = 0.181$ shows that total shareholders return accounts for only 18.1% of the variation in the model. The model is low in autocorrelation (Durbin-Watson = 2.103, $p < 0.05$.) and mutlicolinearity is not a concern as indicated in Panel B where tolerance is not below 0.5 and VIF is not above 2.

In Panel B of Table 35 the regression coefficients show that only ACFEESRATIO (AC fees ratio) is positive and significant at 0.041 (t= 1.867, $p < 0.05$), indicating that higher AC fees paid to the chair and the members of the AC will result in higher total return on equity to the shareholders of the company. Both independent variables AUDFEESRATIO (external audit fees ratio) and IAFBUDRATIO (internal audit function budget ratio) are not significantly associated to TSR (total shareholder returns) ($p > 0.05$). In summary, it can be seen that only

ACFEESRATIO (AC fees ratio) variable is significant. Hence, hypothesis five is also partially supported.

Table 35: Ordinary Least Squares Regression Results Model 7

PANEL A: Model Summary						
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**	**F-ratio**	**Sig.**
0.426	0.181	0.105	3.242	2.103	2.364	0.090

Panel B: Regression Coefficients							
Dependent Variable	**Unstandardized coefficients**		**Standardized Coefficients**			**Collinearity Statistics**	
TSR	**B**	**Std. Error**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Intercept	3.59	1.210		2.970	0.006		
Independent Variables							
ACFEES RATIO	0.000	0.000	0.312	1.867	0.041	0.916	1.092
AUDFEES RATIO	20.210	348.039	0.017	0.058	0.954	0.599	1.346
IAFBUD RATIO	-0.001	0.001	-0.286	-0.983	0.333	0.503	1.303

Note: TSR is total shareholders return; ACFEESRATIO is ratio of total fees paid to the chair and AC members to total number of AC members; AUDFEESRATIO is ratio of total of external audit fees to total assets; IAFBUDRATIO is ratio of total internal audit budget to total assets.

5.4.7.2.2 Discussion of Findings on Model 7

The dependent variable, total shareholders return used in Model 7 captures whether higher audit-related agency monitoring costs (i.e., AC fees, external audit fees and internal audit function budget) have the effect of achieving higher total returns to the shareholders. The findings in Table 35 show that AC fees are significantly related to total shareholders return which leads to partial acceptance of hypothesis five.

This result infers that shareholders tend to obtain an economically rational outcome from the board's approval of relatively higher AC fees paid to the chair and members of the AC, because this impacts positively on total shareholders returns. This significant cost-benefit

result for the AC could reflect the fact that a larger AC that meets more frequently would incur relatively higher AC fees. Such larger and more active ACs are found to generate stronger internal and external auditing for the company. That is, in Models 1, 2, 5 and 6 in this study it is found that AC size, and in some cases AC meeting frequency, is significantly positively related to higher resourcing of the internal audit function, as well as higher external audit fees (indicating higher audit quality) and lower non-audit fees (indicating greater auditor independence). These internal and external audit improvements brought about by larger, more active and, presumably, more costly ACs, are found in Model 7 to translate into greater benefits in terms of returns to shareholders.

However, Table 35 also reveals that no such economically rational outcome is achieved for the shareholders, at least in the short term, from relatively higher costs being incurred directly on external audit fees and internal audit function budget. These variables do not significantly affect shareholders return. This finding in Model 7 may be due to the simple fact that these higher costs do not outweigh the company benefits gained from the improved internal and external audit services, as perceived in the share-market. Alternatively, other short-term phenomena may have had a confounding effect on shareholders return in this study. In particular, this study is based on data from the 2009- 2010 financial years which was still under the effects of the global financial crisis. So relatively higher costs incurred on internal and external auditing services in that year could have been less sensitive to the determination of shareholders return in the Australian share-market in that year.

In conclusion, this study suggests that higher audit-related agency monitoring costs incurred on the AC itself have economic benefits in terms of generating greater shareholder return, at least in the short-term in a climate of financial market downturn. Interestingly, no such short-term economic benefits to the shareholders in a climate of financial market downturn are found from higher costs incurred on the companies' internal and external audit services.

5.5 Conclusion

In this chapter, the results of the data analysis (questionnaire-data based sample and secondary-data based sample) in relation to the effectiveness of ACs in performing their roles especially in the internal audit function and external audit is discussed in detail. In general, results of this study are mixed.

Hypothesis one (a) is partially supported. Only AC size is positive and significantly associated with financial resources devoted to the internal audit function. Furthermore, hypothesis one (b) is also partially supported. The findings show that both AC financial expertise and AC size are positive and significantly related to internal audit function labour hours. Conversely, hypotheses two (a) and (b) are rejected as no results are generated from the stepwise regressions. This latter finding illustrates that no attributes of ACs governance characteristics have a significant impact on the effectiveness of ACs in their role of ensuring the internal audit function independence. Hypothesis three is partially supported too. AC size and AC frequency of meetings are positive and significantly related to external audit fees. In addition, hypothesis four is also partially accepted. Both AC size and frequency of meetings are negatively and significantly related to non-audit fees. Finally, hypothesis five is partially accepted as AC fees are positive and significantly related to total shareholders return.

The following chapter, Chapter 6, presents a comparative case study analysis for four companies in the financials and materials industries, respectively. This next chapter will provide a more in-depth analysis on the key AC's governance characteristics that are found to be significant in this chapter.

CHAPTER 6. COMPARATIVE CASE STUDY ANALYSIS

6.1 Introduction

A more in-depth analysis is reported in this chapter on the key AC's governance characteristics that are found to be significant in the regression analysis from the previous chapter (Chapter 5). To this end, comparative analysis of two companies from the financials industry and two companies from the materials industry is performed. Due to the issue of confidentiality, the four companies will not be named. The companies will be called Company A, Company B, Company C and Company D instead. Company A and Company B are in the financials industry while Company C and Company D are in the materials industry.

First, the companies are compared according to the profile of each company and its audit committee. Then, a detailed descriptive analysis on the nature and activities of the internal audit function, the relationship between the AC and the internal audit function and the independence of the internal audit function of each company is contrasted and examined. A discussion and interpretation of the descriptive analysis of these companies are provided in the latter section of the chapter.

6.2 Selection of the Companies

The findings of the data analysis presented in Chapter 5 shows that AC size, AC expertise and AC frequency of meetings play a significant role in relation to the effectiveness of ACs in performing their roles, especially in the internal audit function. The test of hypothesis one (a) shows that AC size is significantly associated to financial resources devoted to the internal audit function, and the test of hypothesis one (b) shows that both AC expertise and AC size are significantly related to labour hours devoted to the internal audit function. Furthermore, for hypothesis three, the results reveal that AC size and AC frequency of meetings are significantly associated to external audit fees. Hypothesis four also shows that both AC size and AC frequency of meetings are negatively and significantly associated to non-audit fees.

The results of significant AC characteristics are used as the criteria for selecting the companies for comparative case study analysis in this chapter. The case companies are drawn from the companies of 36 respondents collected from the questionnaire. Four companies are selected (two companies from the financials industry and two companies from the materials

industry). In the financials industry, Company A and Company B are chosen because these two companies have the largest and the smallest AC size, respectively, in the financials industry. Company A has the largest AC size with a total of nine members while Company B has the smallest AC size with a total of three members. Both companies have the same level of AC expertise but a different AC frequency of meetings per year.

For the second pair of companies, drawn from the materials industry, the selection criterion is the characteristics of AC frequency of meetings. Company C and Company D are selected because these two companies have the highest and lowest AC frequency of meetings in a year. Company C has the highest AC frequency of meetings with a total of nine meetings per year while Company D has the lowest AC frequency of meetings with a total of two meetings per year. Both companies have the same AC size but different level of AC expertise.

In summary, by comparing two companies in the same industry at the low and high end of the scale for AC size and AC frequency of meetings, a detailed picture can be provided, whether a company with a larger AC size or higher AC frequency of meetings is better at ensuring the effectiveness of its internal audit function compared to a company with a smaller AC size and lower AC frequency of meetings.

6.3 Comparative Case Study in the Financials Industry

A comparison is made between Company A and Company B in the financials industry. The data used are secondary data collected from the annual reports, various financial data collected from the online databases and also information extracted from extra questions in the questionnaire (not used in the statistical analysis in Chapter 4).

6.3.1 Profile of the Companies

Company A is a banking and financial services provider in Australia while Company B is a general insurance group with operations in Australia, New Zealand, United Kingdom, and Asia. Both companies are categorised in the ASX GICS financials industry. In terms of company size, Company A is a much larger public listed company with a total asset of $618.28 billion while Company B has a total asset of $20.45 billion. Based on market

capitalisation, Company A is listed on the ASX top 20 whereas Company B is listed on the ASX top 21-100.

For growth comparison between these two companies, Company A has a higher percentage of three years sales growth, 23.3% compared to Company B with only 1.6%. However, Company A has a lower percentage of operating cash flow ratio with only 1.0% of ability to convert assets into cash whereas Company B has 5.5% of ability to convert assets into cash. For current ratio, every $1.00 owed by Company A in current liabilities, it has $0.01 of current assets whereas every $1.00 owed by Company B in current liabilities, it has $0.64 of current assets. This suggests that Company B has a better ability than Company A to meet its short-term obligations.

Alternatively, Company A has higher overall return generated for its shareholders with a total shareholders return of 526.2% compared to Company B with a total shareholders return of 56.3%. When comparing business performance, Company B has a slightly higher return on assets (0.99%) than Company A (0.95%). For firm complexity, Company A has a total number of 264 subsidiaries, more than Company B that has 107 subsidiaries. However, Company A has less number of foreign subsidiaries (62) compared to Company B (66).

For external audit comparison, both companies engaged big 4 audit firm for their external audit services. Since Company A is a bigger company they paid more audit fees to their external auditors, $16.38 million compared to Company B that paid $9.5 million audit fees to their external auditor (half of Company A's audit fees). Furthermore, Company A paid a total of $2.9 million to their external auditors for non-audit service engagement whereas Company B paid a total of $1.2million.

6.3.2 Profile of the ACs

As mentioned above, the condition of selection being that these companies has the biggest and the smallest AC size. Company A has a bigger AC (9 members) compared to Company B (3 members). Both companies have the same level of expertise among their AC members where 66.7% of their members have accounting or financial qualifications. However, Company B has higher percentage of members that have worked in the financials industry for at least 10 years (100%) compared to Company A (66.7%). In terms of AC frequency of

meetings, Company B has more AC meetings than Company A with a total of 6 meetings and 4 meetings per year respectively. Both companies have a formal AC charter published on their company website. On the other hand, Company A has higher AC chair independence (100%) in contrast to Company B (75%). Last but not least, Company A paid $75,000 AC fees per annum to its chair and members whereas Company B paid $21,000 less.

6.3.3 Questionnaire Comparison

6.3.3.1 Introduction

Findings from Chapter 5 illustrates that AC size plays a significant role in relation to the effectiveness of AC in performing their roles especially in overseeing the quality of the internal audit function. A larger AC size in a company would ensure higher quality of internal audit function by allocating more budget and labour hours to internal audit activities. Thus, using information collected from the questionnaire, this section will compare Company A (largest AC size) with Company B (smallest AC size).

6.3.3.2 Profile of the Internal Audit Function

Since Company A is a much bigger company, it has a very large internal audit function in contrast to Company B. Company A employed 100 professional staff in their internal audit function with 76 full- time equivalent staff whereas Company B employed only 22 professional staff with 17 full- time equivalent staff. Both companies have the same approximate total budget allocated to their internal audit function (approximately $1,000,000 and above). On average, 2600 hours per person are devoted to internal audit services by Company B's professional staff for the financial year ending in 2010. However, Company A allocated less labour hours to their internal audit function. On average, 1500 hours per person are devoted to internal audit services by Company A's professional staff during the same financial year.

Moreover, Company A reported that sometimes its internal audit function provide a training ground as part of its employees' career path in the company and often has internal audit function staff moving to other management functions within the organization. In contrast, Company B reported that its internal audit function sometimes provide a training ground as

part of the employees' career paths and sometimes having internal audit function staff moving to other management functions within the organization.

6.3.3.3 Internal Audit Function Activities

Proportion of total labour hours allocated to internal audit function activities differ slightly between Company A and Company B. Company A has the most percentage of labour hours allocated to maintaining the efficacy of management control systems (50%), evaluating the effectiveness of risk management (30%), and both at 10% for financial statement auditing and engaging in board and other corporate governance support work. Conversely, Company B has the most percentage of labour hours allocated to evaluating the effectiveness of risk management (47%), maintaining the efficacy of management control systems (46%), financial statement auditing (5%) and deterring and investigating fraud (2%). No total hours are assigned to engaging in board and other corporate governance support work.

6.3.3.4 Internal Audit Function Authority

Good AC practices in overseeing the internal audit function include: 1) making recommendations to the board on the appointment and dismissal of CIA; 2) ensuring that internal audit activity reports to the AC for functional purposes and reports to the CEO for administrative purposes and 3) reviewing internal audit resources and budget setting (AUASB, AICD and IIA, 2008).

Both companies strongly agree that their internal audit function reports to the AC, CEO and CFO. Company A strongly agrees that AC and CEO in their company are responsible for setting and approving the internal audit budget compared to CFO. However, the situation is totally different for Company B. Both CEO and CFO play the most important role in Company B's internal budget setting compared to AC. Moreover, for Company A, AC, CEO, and CFO share the same responsibility in appointing and replacing the CIA of internal audit function whereas for Company B, CEO plays the most important role in appointing and replacing the CIA.

6.3.3.5 Internal Audit Function and External Auditors

For coordination of internal audit function with the external auditors, both companies' internal audit function often work together with their external auditors in the areas of internal audit coverage. Company A's internal audit function also coordinate internal audit work schedule with their external auditors but Company B's internal audit function only occasionally coordinate internal audit work schedule with their external auditors. On the other hand, the external auditors of Company A always have access to the working papers and most management reports of the internal audit function but the external auditors of Company B has limited access.

6.3.3.6 AC and Internal Audit Function

The internal audit function of Company A and Company B have the same number of meetings (4 meetings per year) with their AC but Company A has longer length of meetings (on average 180 minutes per meeting) compared to Company B (on average 30 minutes per meeting). In terms of privacy of the internal audit function meetings with the AC, all Company A's meetings are partially private while all Company B's meetings are totally private.

The internal audit function of each company is asked to rate the overall expertise of their AC members in regards to accounting, auditing and internal control matters. Both Company A and Company B rated the expertise of its AC being good. Furthermore, there is a huge comparison between the two companies in relation to AC reviewing the plans of the internal audit function. Company A's AC often reviews the plans of the internal audit function in terms of its scheduling of work projects and co-coordinating with the external auditors but Company B's AC never does so.

Moreover, Company A's AC receives more reports from its internal audit function compared to Company B. Company A's AC receives more than 6 reports per year regarding routine internal audit activities and receives 3 to 5 reports per year regarding special investigations. In contrast, Company B's AC receives 3 to 5 reports per year relating to routine internal audit activities and receives only 1 to 2 reports per year relating to special investigations from its internal audit function.

6.3.3.7 Internal Audit Function Independence

Company A's internal audit function has a better existing relationship with its AC and Company A's internal auditors also provide a strong backing for the maintenance of their internal audit function's independence in contrast to Company B. In addition, the independence of both companies' internal audit function is strongly upheld because of their AC members have strong collective independence. The AC of Company A and Company B would be prepared to take action to maintain the independence of their internal audit function if it is threatened by the management of the company.

6.3.3.8 Discussion

The relationship between the internal audit function and the AC in an organization is deemed to be a critical one. The goals of these two functions are closely related to each another and a good relationship between them can enhance the overall quality of corporate governance. An effective AC can enhance the status of the internal audit function and in turn the internal audit function can help the AC in detecting financial misstatements (McHugh and Raghunandan, 1994). From the comparison of questionnaire data provided by the CIA of Company A (largest AC size) and Company B (smallest AC size), it can be seen that there are several differences between these two companies.

Firstly, substantial differences are found in the distribution of total labour hours allocated to different internal audit function activities. Company A's total labour hours are dominated by maintaining the efficacy of management control systems, evaluating the effectiveness of risk management, financial statement auditing and engaging in board and other corporate governance support work. By comparison, Company B allocated its total hours more narrowly on maintaining the efficacy of management control systems and evaluating the effectiveness of risk management. This shows that Company A devotes a consideration portion of internal audit hours to more internal control activities compared to Company B. It can be argued that Company A, having a larger AC, has a more diverse set of skills and knowledge to oversee and support the internal audit function's development and execution of its internal control systems. A larger AC will put a stronger emphasis on preventing material control weaknesses, reacting proactively to increase internal controls, upholding corporate governance support work and increasing financial statement auditing.

The second main difference is Company A's AC has more authority than the CEO and CFO in internal audit budget setting, compared to Company B where the AC has no authority to override the CEO and CFO. It can be argued that Company A's larger AC size gives it more authority and voice in internal audit budget setting than Company B's small AC size. Larger ACs should command relatively more internal audit function oversight and be able to demand relatively greater resources and internal audit focus allocated to internal controls. Carcello et al. (2005) found a positive association between ACs that reviewed the internal audit's budget and the size of the budget.

To ensure an effective internal control system is implemented within an organization, the AC is responsible to review the internal audit proposals related to plans, programs and coordination with external auditors (Raghunandan et al., 2001). From the comparison between these two companies, it can be seen that Company A's AC often reviews or assesses the plans of the internal audit function in terms of scheduling of work projects and coordinating with the external auditors, but Company B's AC never does so. This implies that Company B's larger AC has more members with technical expertise collectively have a better understanding of the internal audit function's work and have the ability to review all the work and plans done by the internal audit function. According to Carcello et al. (2005), the review of the internal audit plans by the AC suggests a greater commitment to internal audit monitoring and risk oversight and is likely to manifest itself in greater resources being provided to internal audit.

Also, Company A's AC receives more reports from its internal audit function regarding routine internal audit activities and special investigations compared to Company B's AC. It can be argued that more members in the AC will ensure better quality of the internal audit function by demanding that internal auditors to provide more reports related to internal audit activities. Felo et al. (2003) argued that a larger AC increases financial reporting quality as it is more likely to discover and solve potential risks in the financial reporting process. This may be possible if the resources available to the AC are increased to improve the oversight of financial reporting.

The next main difference reported is that Company A's internal audit employees have a longer length of meetings with their AC (on average 150 minutes per meetings longer)

compared to Company B. To improve the effectiveness of the internal audit function, conducting regular meetings between the AC and the internal audit function is vital (Scarbrough et al., 1998). Thus, this shows that Company A's larger AC is more efficient in organizing meetings with its internal audit employees and ensures that longer meetings are conducted. More hours spent on conducting a meeting will better enable the needs of the organization to be met by ensuring the planned scope of internal auditing issues are discussed and reviewed during the meeting.

For internal audit function independence, it is found that Company A's internal audit function has a better existing relationship with its AC. Also Company A's internal auditors provide a strong backing for the maintenance of their internal audit function's independence in contrast to Company B. Moreover, it is likely that the strong internal audit function of Company A (i.e., the internal auditors provide a strong backing for the maintenance of their internal audit function's independence) can enhance the effectiveness of the AC; an effective AC (i.e., larger size) in turn can strengthen the position of the internal audit function. Goodwin and Yeo (2001) found that an effective AC can strengthen the position of the internal audit function by acting as an independent forum in which internal auditors may raise matters affecting management.

Based on the assessment above of the main differences found in the comparative case study analysis between Company A (largest AC size) and Company B (smallest AC size), the findings are compatible with the results from the hypotheses test in Chapter 5. AC size does play a significant role in relation to the effectiveness of an AC in performing its role in overseeing the quality of the internal audit function. This case assessment re-enforces the results of regression models 1 and 2. However, this conclusion needs to be qualified by the fact that other variables such as the complexity of business arrangement could also affect the effectiveness of an AC in performing its role in overseeing the quality of the internal audit function.

6.4 Comparative Case Study in the Materials Industry

A comparison is made between Company C and Company D in the materials industry. The data used in the comparative case study are secondary data and also data collected from the questionnaire for financial year ending in 2010.

6.4.1 Profile of the Companies

Company C is a global corporation and among the world's largest producers of commodities. Activities involve mining, exploration, production and distribution of minerals, petroleum and uranium. Conversely, Company D is an Australian-based nickel sulphide explorer and producer. In terms of company size, Company C is a large public listed company in Australia with a total asset of $122.32 billion while Company D has a total asset of $0.52 billion. Based on market capitalisation, Company C is listed on the ASX top 20 whereas Company D is listed on the ASX top 101- 300.

For growth comparison between these two companies, Company D has a very much higher percentage of three years sales growth, 113.9% than Company C with only 9.7% of three years sales growth rate. However, Company D has a lower percentage of operating cash flow ratio, 16.7% of ability to convert assets into cash compared to Company C, 3.5% more ability to convert assets into cash. For current ratio, every $1.00 owed by Company C in current liabilities, it has $1.96 of current assets whereas every $1.00 owed by Company D in current liabilities, it $2.22 of current assets. This proved that Company D has a better capacity than company C to pay short-term obligations. For total shareholders return, Company C has a really excellent and high overall return generated for its shareholders with a total shareholders return of 304.9% compared to Company D with a total shareholders return of 72.2%.

Furthermore, 56.7% of Company D's total assets are financed through long term debt whereas only 15.3% of Company C's total assets are financed through long term debt. When comparing business performance, Company C has a higher return on assets (14.7%) than Company D (6.9%). For company complexity, Company C has a total of 77 subsidiaries (39 foreign subsidiaries) more than Company D which has a total of 4 subsidiaries (no foreign subsidiaries). For external audit comparison, Company C employs big 4 audit firm for its external audit services while Company D employs a smaller audit firm. Since Company C is

a much bigger company they paid more audit fees to their external auditors, $15.70 million compared to Company D that paid only $132,000 audit fees to its external auditors. Moreover, Company C paid a total of $10.36 million to its external auditors for non-audit service engagements whereas Company D paid a total of $26,000.

6.4.2 Profile of the ACs

As mentioned above, the condition of selection being that these companies have the most and least frequency of AC meetings in a year. Company C has the most frequency of AC meetings, 9 meetings in a year compared to Company D with only 2 meetings in a year. Although Company C is a much larger company than Company D, both companies have the same number of members on the AC (4 members) and both companies also have the same level of AC chair independence (50%).

Company C has a higher level of expertise among its members where 75% of its AC members have accounting or financial qualifications whereas only 50% of Company D's AC members have accounting or financial qualifications. However, Company D has higher percentage of members that has worked in the materials industry for at least 10 years (50%) compared to Company C (25%). Both companies have a formal AC charter published on their company website. On the other hand, Company C paid a total of $ 75,000 AC fees per annum to its chair and members whereas Company D paid $47,000 less.

6.4.3 Questionnaire Comparison

6.4.3.1 Introduction

Results from previous chapter (Chapter 5) shows that AC frequency of meetings is significant in relation to the effectiveness of AC in performing roles of overseeing the quality of the internal audit function. ACs who meet frequently are more likely to be informed about the internal auditing issues and subsequently demand higher quality of internal audits. Hence, using information collected from the questionnaire, this section will compare Company C which has the most frequency of AC meetings in a year with Company D which has the least frequency of AC meetings in a year.

6.4.3.2 Profile of the Internal Audit Function

Given that Company C is a huge company in Australia, it has a very large internal audit function compared to Company D. Company C hired 54 professional staff in its internal audit function with 36 full-time equivalent staff whereas Company D just has one professional staff. There is also a huge comparison between the total budgets allocated to internal audit function by each company. Company C has approximately $1,000,000 and above total budget allocated to its internal audit function while Company D only has approximately $20,000 and below total budget allocated to its internal audit function. On average, 1300 hours per person are devoted to internal audit services by Company C's professional staff for financial year ending in 2010. Company D allocated 800 less labour hours per person to its internal audit function.

Furthermore, Company C reported that its internal audit function always provide a training ground as part of its employees' career path in the company and always has internal audit function staff moving to other management functions within the organization. In contrast, Company D reported that its internal audit function only occasionally provide a training ground as part of the employees' career path and never has staff moving to other management functions within the organization.

6.4.3.3 Internal Audit Function Activities

The proportion of total labour hours allocated to internal audit function activities differ between Company C and Company D. Company C has the most percentage of labour hours allocated to maintaining the efficacy of management control systems (45%), evaluating the effectiveness of risk management (25%), financial statement auditing and engaging in board and other corporate governance support work (both at 10%) and deterring and investigating fraud (5%). On the other hand, Company D has the most percentage of labour hours allocated to maintaining the efficacy of management control systems (50%), evaluating the effectiveness of risk management (40%) and engaging in board and other corporate governance support work (10%). No total hours are allocated to deterring and investigating fraud and financial statement auditing.

6.4.3.4 Internal Audit Function Authority

Both companies have their internal audit function reports to the AC and CFO. Company C strongly agrees that AC and CFO in the company are responsible for setting and approving the internal audit budget compared to the CEO. However, the situation is totally different for Company D. CFO plays the most important role in Company D's internal audit budget setting compared to AC and CEO. Moreover, for Company C, AC and CFO share the same responsibility in appointing and replacing the CIA of the internal audit function whereas for Company D, the CFO plays the most important role in appointing and replacing the CIA.

6.4.3.5 Internal Audit Function and External Auditors

Company C's internal audit function has a very much better coordination with its external auditors compared to Company D. Company C's internal audit function always work together with their external auditors in the areas of internal audit coverage and internal audit work schedule but the situation is totally opposite for Company D. In addition, the external auditors of Company C always have access to the working papers and most management reports of the internal audit function compared to the external auditors of Company D that has no access at all.

6.4.3.6 AC and Internal Audit Function

The internal audit function of Company C has more meetings (8 meetings per year) with its AC in contrast to Company D (4 meetings per year). Also Company C has longer length of meetings (on average 120 minutes per meeting) compared to Company D (on average 30 minutes per meeting). In terms of privacy of the meetings with the AC, some of Company C's meetings in a year have private time while Company D has no private meetings at all.

The internal audit functions of each company are asked to rate the overall expertise of their AC members in regards to accounting, auditing and internal control matters. There is a huge comparison between these two companies. Company C rated the expertise of its AC being excellent while Company D rated the expertise of its AC being poor. Moreover, Company C's AC often review the plans of the internal audit function in terms of its scheduling of work projects and co-coordinating with the external auditors. Conversely, Company D's AC only occasionally reviews the plans of the internal audit function in terms of its scheduling of work projects and co-coordinating with the external auditors. In addition, Company C's AC

also receives more reports from their internal audit function compared to Company D. Company C's AC receives 3 to 5 reports per year regarding routine internal audit activities and special investigations. In contrast, Company D's AC receives only 1 to 2 reports per year.

6.4.3.7 Internal Audit Function Independence

Company C's internal audit function has a very much better existing relationship with its AC and its internal auditors provide a strong backing for the maintenance of their internal audit function's independence compared to Company D. In addition, the independence of Company C's internal audit function is strongly upheld because of its AC members have strong collective independence in contrast to Company D. The AC of both companies would be prepared to take action to maintain the independence of their internal audit function if it is threatened by the management of the company.

6.4.3.8 Discussion

From the comparison of questionnaire data provided by the CIA of Company C which has the most AC frequency of meetings and Company D which has the least AC frequency of meetings, it can be seen that there are several distinguish differences between these two companies. First and foremost, Company C has a huge amount of total internal audit budget and labour hours allocated to the internal audit function. It also has more professional internal audit staff employed in the company compared to Company D.

It is found that Company C's AC that meets more often than Company D's AC in a year is more likely to discuss issues faced by the internal audit function and to review the planned scope of the internal auditing. Thus, Company C's AC is more likely to be up to date about the current internal auditing issues faced by the company and is more attentive in discharging its responsibilities by allocating more resources (budget, staff and total labour hours) to the internal audit function. Carcello et al. (2005) found that the internal audit budget is higher when the AC reviews the internal audit budget. Also, Raghunandan et al. (2001) found that ACs that meet at least four times annually are more likely to review and approve the internal audit's plans and budget.

Additionally, this study finds substantial differences in the allocation of total labour hours to the internal audit function activities. Company C's total labour hours are dominated by

maintaining the efficacy of management control systems, evaluating the effectiveness of risk management, financial statement auditing, engaging in board and other corporate governance support work and deterring and investigating fraud. In contrast, Company D's internal audit function allocated its total hours more on maintaining the efficacy of management control systems, evaluating the effectiveness of risk management and engaging in board and other corporate governance support work.

It can be seen that Company C allocates a larger portion of internal audit hours to more internal control activities compared to Company D. Company C's AC whom meet more frequently is likely to demand a higher quality from the internal audit function by ensuring that the internal auditors engage in performing more testing on controls, evaluating risk management, investigating fraud, performing financial statement audits and providing corporate governance support work. Abbott et al. (2010) argued that an effective AC wants to heighten the quality of the internal audit function and wishes to have the internal audit function allocate relatively more of its resources towards internal control evaluation.

The next main difference is that Company C's AC and CFO share authority in internal audit function budget setting compared to Company D where only the CFO has authority in budget setting. It is likely that, with more frequent meetings in a year, Company C's AC is more informed and knowledgeable about the internal audit function and would demand more resources for the internal audit function when setting the budget. Christopher et al. (2009) argued that giving the CEO or CFO sole responsibility for setting approving the internal audit budget may be considered a serious threat to the independence of the internal audit function as the imposing of budget constraints is a powerful tool with which management can reduce the scope and impact of the internal audit function.

Moreover, Company C's AC and CFO have the most substantial influence in any decisions to appoint or replace the CIA compared to Company D where the CFO has the most authority. McHugh and Raghunandan (1994) found that a large majority of internal auditors indicated that giving vesting or firing authority to the AC would enhance the independence of the internal audit function, reduce oversight by the AC and improve the ability of internal auditors to generate action on audit findings. Also, Scarbrough et al. (1998) found that when

an AC is involved in decisions to dismiss the CIA, the CIA is more likely to have private access to the AC.

A further notable difference is that Company C's internal audit function has more frequent meetings and also has a longer length of meetings with its AC in contrast to Company D. According to Scarbrough et al. (1998), conducting regular meetings between the AC and internal audit function is widely recognized as an important vehicle of improving the effectiveness of internal audit in the company. In reference to Company C, its AC which has more frequent meetings would be more attentive to issues faced by the internal audit function. In addition, some meetings of Company C's internal audit function with their AC have private time while there are no private meetings between Company D's internal audit function and its AC. Kalbers and Fogarty (1993) argued that the meetings between the CIA and the AC should be conducted in private without the presence of members of company management, since private meetings serve the purpose of enhancing and protecting the independence of internal auditors.

In terms of the expertise of AC members, Company C's internal audit function rated the overall expertise of its AC members in regards to accounting, auditing and internal control matters as excellent while the scenario is totally different for Company D. Company D's internal audit function rated the overall expertise of its AC members in as poor. This indicates that effective ACs where Company C has more frequent AC meetings and higher AC expertise than Company D are seen by their internal audit function as knowledgeable. Raghunandan et al. (1998) found that ACs which granted private access to the CIA, and reviewed both the program and results of the internal auditing, are perceived as knowledgeable about accounting and auditing issues by the company's CIA.

From the comparison of responses between Company C and Company D, Company C's AC often reviews or assesses the plans of the internal audit function in terms of scheduling of work projects in contrast to Company D's AC. A possible argument might be that Company C's AC that meets frequently, is more likely to be up to date about the current internal auditing issues faced by the company and is more diligent in discharging its responsibility of reviewing the internal audit function's plan. Goodwin and Yeo (2001) found that almost 70% of ACs in Singapore reviewed all plans, budget and results relating to financial reporting,

internal control and compliance. Furthermore, Company C's AC receives more reports from its internal audit function regarding routine internal audit activities and special investigations as compared to Company D's AC. It can be argued that with more frequent meetings, AC is more knowledgeable about the internal audit function and will ensure better quality of the internal audit function by demanding the internal auditors provide more reports related to internal audit activities.

Turning to the issue of ensuring the independence of the internal audit function, it is found that Company C's internal audit function has a better existing relationship with its AC. Moreover, the internal auditors at Company C provide a strong backing for the maintenance of its internal audit function's independence in contrast to Company D. Moreover, the independence of Company C's internal audit function is strongly upheld because AC members have strong collective independence compared to Company D. Scarborough et al. (1998) suggested that effective ACs are associated with objective and independent internal audit functions. This upholding of independence suggests that Company C's AC has a good working relationship with its internal audit function. Company C's more effective AC can strengthen the position of the internal audit function by acting as an independent forum for internal auditors to raise matters affecting the internal audit function (Goodwin and Yeo, 2001). Simultaneously, Company C's internal audit function can assist its AC fulfilling its oversight role regarding reporting, risk management and control. This, in turn implies a higher quality of internal audit function.

Based on the assessment of the main differences found in the comparative case study between Company C (most AC frequency of meetings) and Company D (least AC frequency of meetings), strong evidence is found to support findings in Chapter 5. AC frequency of meetings plays an important part in relation to the effectiveness of an AC in performing its role of overseeing the quality of the internal audit function. The results of regression models 1 and 2 are confirmed by this comparative case study analysis. However, this conclusion needs to be qualified by the fact that other variables such as the complexity of business arrangement could also affect the effectiveness of an AC in performing its role in overseeing the quality of the internal audit function.

6.5 Conclusion

In this chapter, a comparative case study analysis between two different companies in the financials and materials industry is discussed in detail. The results are generally supportive where AC size and frequency of meetings play a significant role in relation to the effectiveness of AC in performing their roles especially in the internal audit function and are consistent with results of the regression models in Chapter 5.

CHAPTER 7. CONCLUSIONS, LIMITATIONS, IMPLICATIONS AND FUTURE RESEARCH

7.1 Introduction

This concluding chapter is structured into four sections. The first section will reiterate the purpose, rationale and approach taken in this study and summarise conclusions from the findings. The second section discusses the limitations of the study. In the third section, the practical implications of the study are considered. The final section contains some suggestions for future research.

7.2 Summary of the Study

The main aim of this study is to contribute to existing literature on AC effectiveness in fulfilling its audit oversight role, as assessed through its corporate governance characteristics. No prior empirical evidence has been provided from the viewpoint of testing the effectiveness of AC's governance characteristics in fulfilling their dual roles of overseeing the internal and external audit functions. Moreover, previous studies have been limited in measuring the effectiveness of ACs and this study will provide a more comprehensive empirical design.

This study also has practical motivation. It examines AC effectiveness under the ASX CGC revised 2007 edition best practice recommendations. The Australian context lends itself to research as this 2007 regulatory change relating to ACs, enables the findings of this study to give an assessment of whether regulatory changes have strengthened the AC roles or not. A further practical consequence of this research is to assess whether higher agency costs (i.e., AC fees, external audit fees and internal audit budget) can better protect the interest of the shareholders.

This study is based on economic perspectives embodied in agency theory. The premise is that the AC, through its monitoring roles, will reduce agency problems associated with information asymmetry and moral hazard. The concept of AC effectiveness can be benchmarked against the roles outlined for ACs by the ASX CGC. Four of these AC roles are examined in this study: 1) AC overseeing the quality of the internal audit function, 2) AC

ensuring the independence of the internal audit function, 3) AC facilitating the quality of the external audit and 4) AC ensuring the independence of the external auditors. Five hypotheses are developed from AC studies and this study has identified five factors that impact on the role of effectiveness of an AC (i.e., independence of AC chair, financial and industry expertise of AC members, frequency of meetings of AC, size of AC and AC formal charter).

Mixed methods are used to gather both primary and secondary data. There are two stages of data collection employed- the questionnaire data collection stage and the secondary data collection stage. In the first stage of data collection, a questionnaire is developed and administered to the CIA of the sampled companies. In the second stage of data collection, secondary data (financial and non-financial) of top 300 ASX listed companies listed during the 2010 financial year is hand collected from annual reports and financial databases. The five hypotheses of this study are tested using ordinary least squares and stepwise regression models. A comparative case study analysis is also performed for four specific companies, two from the financials industry and two from the materials industry. Comparative case study analysis provides a more in-depth analysis on the key AC's governance characteristics found to be significant in the regression analysis.

7.3 Findings of the Study

The findings of this study are obtained from the analysis of both primary and secondary data. First, data collected from the questionnaire sent to CIA are used to test hypothesis one (a), hypothesis one (b), hypothesis two (a) and hypothesis two (b). Hypothesis one (a) is partially supported. Only AC size is positive and significantly associated with financial resources devoted to the internal audit function. Furthermore, hypothesis one (b) is also partially supported. The findings show that both AC financial expertise and AC size are positive and significantly related to internal audit function labour hours. Conversely, hypotheses two (a) and (b) are rejected as no results are generated from the stepwise regressions. This latter finding illustrates that no attributes of ACs governance characteristics have a significant impact on the effectiveness of ACs in their role of ensuring the internal audit function independence.

Second, data collected from the annual reports and financial databases are used to test hypothesis three and hypothesis four. Hypothesis three is partially supported too. AC size and

AC frequency of meetings are positive and significantly related to external audit fees. This proves that AC size and AC frequency of meetings are effective in facilitating the quality of the external audit. In addition, hypothesis four is also partially accepted. Both AC size and frequency of meetings are negatively and significantly related to non-audit fees. ACs governance characteristics of size and frequency of meetings are effective in their role of ensuring the independence of the external auditors.

Finally, in the agency costs-benefit analysis, overall data (combination of questionnaire and secondary data) are used to test hypothesis five. Hypothesis five is partially accepted as AC fees are positive and significantly related to total shareholders return. However both independent variables, external audit fees and internal audit function budget are not significantly associated with total shareholders return. These results reveal that audit-related agency monitoring costs are only rationally incurred to generate returns to the shareholders, at least in the short-term, when those costs relate to the members of the AC itself.

Furthermore, results from the comparative case study analysis between two different companies in the financials and materials industry are generally supportive where AC size and frequency of meetings play a significant role in relation to the effectiveness of AC in performing their roles especially in the internal audit function and are consistent with results of the regression models in. A summary of these findings is given in Table 36. Highlights of similarities and differences between these findings and prior empirical studies have been discussed in Chapter 5 and Chapter 6 of the thesis (Refer to Section 5.4.4.3, Section 5.4.5.3, Section 5.4.6.3.3, Section 5.4.6.3.6, Section 5.4.7.2.2, Section 6.3.3.8 and Section 6.4.3.8).

Table 36: Summary of Findings

	Findings	Summary
Hypothesis One (a)	Partially supported	AC size is positive and significantly associated with financial resources devoted to the internal audit function.
Hypothesis One (b)	Partially supported	AC financial expertise and AC size are positive and significantly related to internal audit function labour hours.
Hypothesis Two (a)	Rejected	No attributes of ACs governance characteristics have a significant impact on the effectiveness of ACs in their role of ensuring the internal audit function independence.
Hypothesis Two (b)	Rejected	No attributes of ACs governance characteristics have a significant impact on the effectiveness of ACs in their role of ensuring the internal audit function independence.
Hypothesis Three	Partially supported	AC size and AC frequency of meetings are positive and significantly related to external audit fees.
Hypothesis Four	Partially supported	AC size and frequency of meetings are negatively and significantly related to non-audit fees.
Hypothesis Five	Partially supported	AC fees are positive and significantly related to total shareholders return.
Comparative Case Study: Company A (largest AC Size) vs. Company B (smallest AC Size)	Support hypotheses findings	AC size does play a significant role in relation to the effectiveness of an AC in performing its role in overseeing the quality of the internal audit function.
Comparative Case Study: Company C (most AC frequency of meetings) vs. Company D (least AC frequency of meetings)	Support hypotheses findings	AC frequency of meetings plays an important part in relation to the effectiveness of an AC in performing its role of overseeing the quality of the internal audit function.

7.4 Limitations of the Study

This study has several limitations. There are limitations with the data, the model specification and the scope for generalizing the results.

First, the data in this study are collected from the use of a questionnaire instrument and from hand-extracted secondary data in the company annual reports. This data could be subjected to error and bias. In terms of the primary data obtained using the questionnaire, limitations are embodied in the design and administration of any field surveys. Because several questions in the questionnaire are new to this study, their lack of prior testing does present a limitation for internal validity. However, the questions have been drawn from various literature sources and pre-tested for their meaningfulness and understandability.

Nevertheless, respondent biases could be present due to problems of acquiescence (i.e., second-guessing the responses that the researcher might view as favourable), partitioning (i.e., not giving any responses at the extremes of the Likert scales) and 'halo effect' (i.e., giving self-ratings that are inflated). Turning to the administration of the questionnaire, the study faced practical difficulties in fully identifying and accessing the target population of CIAs. There is a possibility of lack of control on who completed the questionnaire since it is mailed to the CFOs of top 300 ASX listed companies, whose names are publicly available, for forwarding to the company's CIA. This increased the probability that some responses are the delegate of the CIA.

Second, the model specification might use variables that do not directly measure the concept of 'role effectiveness' of ACs. Instead various governance characteristics of the AC are measured. The effectiveness of the AC in fulfilling its roles is inferred from the strength of the association between these governance characteristics and specific proxy measures on the quality and independence of the internal audit function and external audit services. The six AC governance characteristics used to measure AC effectiveness (chair independence, financial and industry expertise, size, frequency of meetings and charter) are likely to be built from behavioural and organisational aspects that are not reflected in the proxy measures.

Third, the scope to generalization of the results is limited. The results can be generalized only to the population from which the sample is drawn. The sample is limited to the top 300 ASX

listed companies and to the 2009- 2010 financial year. The year is representative of a period of financial market downturn. Further, the low response rate to the questionnaire survey means that sample used in this study may not be representative of the population of CIAs in the top 300 ASX listed companies.

7.5 Implications of the Study

The findings of this study have important implications for the shareholders and the board of directors. Other interested parties for which the findings would have implications would include regulators of corporate governance practices, accounting professional bodies and academics.

The findings of the study have implications for regulators of corporate governance practices in terms of the composition and functioning of ACs in Australia. Currently, the formation, structure and operation of ACs in Australia are regulated by ASX listing rules and ASX CGC best practice recommendations. The findings of this study will help standard setters and policy makers to review the success or otherwise of ACs in Australia in fulfilling their roles especially in the internal and external audit functions. The findings may support the ASX CGC recommendations to strengthen the internal, external audit and corporate mechanisms for listed companies in Australia. For example, this appears to be a need for the ASX to consider special regulations concerning the adequacy of the budget for operating an AC that listed companies maintain during economic downturn. Also, the findings of the study are important as they provide new evidence on the extent of effectiveness of ACs in fulfilling their primary roles. The fact ACs are less effective in areas such as maintaining internal audit function independence should be a signal to management and regulators.

More generally, the results of this study should provide the accounting professional bodies in Australia such as the Institute of Internal Auditors Australia (IIA), Institute of Chartered Accountants Australia (CA) and Certified Practicing Accountant Australia (CPA) with better understanding regarding the effective practice of ACs in overseeing the quality of internal and external audit and also ensuring the independence of internal and external auditors. This improved understanding can lead to accounting professional bodies providing recommendations to their members on improving the relationship between the ACs, internal auditors and external auditors.

Furthermore, this study has implications to the user of the annual reports especially the shareholders. To reduce shareholders-managers agency conflicts, an AC that consists of independent non-executive directors without a day-to-day management responsibility is in a good position to perform a monitoring function for the shareholders (Goddard and Masters, 2000). The quality of AC members is important because of the significant agency benefit and costs incurred in operating an AC.

Lastly, the findings of this study can help the board of directors choose the best AC members in ensuring that AC is at its best in performing its roles as a key corporate governance mechanism in the company. Moreover, there are implications to the academics of this study as that it can enrich the literature on AC effectiveness and operations. The findings should not only benefit readers in understanding the effectiveness of ACs in Australia in performing their roles but also produce some policy implications that may be applicable to other countries as well.

7.6 Suggestions for Future Research

This study leaves open a number of opportunities for future research. First, future quantitative studies may consider using a more refined measure of independence, expertise, diligence and authority of ACs. A direct measure of role fulfilment effectiveness of ACs could also be developed. Moreover, this study could extend its database to include an investigation of smaller companies listed on the ASX or for privately owned companies, or companies operating in countries with differing regulatory requirements.

Second, the study uses quantitative data (questionnaire data-based sample and secondary data-based sample) which serves to highlight statistical average relationships between formally measured variables. This quantitative positivist approach does not reveal the informal arrangements that exist within ACs and between ACs, the board, the controlling shareholders, the internal and external auditors, and the top management. A complementary research approach would be to undertake interpretative qualitative methods, particularly case-based interviews and observations that could give deeper understanding of behaviours amongst key organizational players.

Third, the theoretical perspective taken in the study is restricted to an economic rationalist, agency view of shareholders-management relationships. It is beyond the scope of this study to examine AC effectiveness under institutional theory perspectives, particularly the perspectives of legitimization and loose coupling. For example, future research could consider whether the reporting in annual reports of an AC having good governance characteristics, is only loosely coupled to the real behaviours of members of an AC. Additionally, future research could consider whether the impacts of behavioural relationships between the AC and the board, and between the AC and management, are linked to the notion of the AC's effectiveness in fulfilling its roles.

REFERENCES

Abbott, L.J., & Parker, S. (2000). The effects of audit committee activity and independence on corporate fraud. *Managerial Finance*, 26(11), 55-67.

Abbott, L.J., Parker, S., & Peters, G. (2003). An empirical investigation of audit fee, non-audit fees and audit committees. *Contemporary Accounting Research*, 20(2), 215-234.

Abbot, L.J., Parker, S., & Peters, G.F. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory*, 23(1), 69-87.

Abbott, L.J., Parker, S., & Peters, G.F. (2010). Serving two masters: the association between audit committee internal audit oversight and internal audit activities. *Accounting Horizons*, 24(1), 1-24.

Abbott, L.J., Parker, S., Peters, G.F., & Raghunandan, K. (2003). The association between audit committee characteristics and audit fees. Auditing: *A Journal of Practice & Theory*, 22(2), 17-32.

Abbott, L., Parker, S., Peters, G., & Rama, D.V. (2003). Audit committee effectiveness and internal audit outsourcing. Working paper, USA: University of Memphis.

Abdul Rahman, R., & Mohamed Ali, F.H. (2006). Board, audit committee, culture and earnings management: Malaysia evidence. *Managerial Auditing Journal*, 21(7), 783-804.

Aboody, D. (1996). Market valuation of employee stock option. *Journal of Accounting and Economics*, 22, 357-391.

Ahmad, Z., & Taylor, D. (2009). Commitment to independence by internal auditors: the effects of role ambiguity and role of conflict. *Managerial Auditing Journal*, 24(9), 899-925.

Amir, E., & Lev, B. (1996). Value relevance of non-financial information: the wireless communication industries. *Journal of Accounting and Economics*, 22, 3-30.

Auditing & Assurance Standards Board (AUASB), Australian Institute of Company Directors (AICD), & Institute of Internal Auditors Australia (IIA). (2008). *Audit committees: a guide to good practice*. Ligare Pty Ltd, Riverwood, NSW.

Ashbaugh, H., LaFond, R., & Mayhew, B.W. (2003). Do nonaudit services compromise auditor independence? Further evidence. Working paper, USA: University of Wisconsin.

Australian Industry Group (AI). (2010). Australian economic update- September 2010. Economic Research Note. Australia, viewed 29th October 2012. <http://www.aigroup.com.au/portal/binary/com.epicentric.contentmanagement.servlet.ContentDeliveryServlet/LIVE_CONTENT/Publications/Reports/2010/Australian_Economic_Update_September_2010.pdf>

Australian Stock Exchange (ASX). (2001). *Guidance Note 9 Disclosures of Corporate Governance Practices: Lsting Rule 4.10*.

Australian Stock Exchange (ASX). (2006). *ASX Listing Rules- Chapter 12.*

Australian Stock Exchange (ASX). (2010). *S&P/ASX Australian indices. Index methodology*. Australia, viewed 8th August 2010. <http://www.standardandpoors.com/servlet/BlobServer?blobheadername3=MDT-Type&blobcol=urldata&blobtable=MungoBlobs&blobheadervalue2=inline%3B+filename%3DMethodology_SP_Australian_Indices_Web.pdf&blobheadername2=Content-Disposition&blobheadervalue1=application%2Fpdf&blobkey=id&blobheadername1=content-type&blobwhere=1243672697462&blobheadervalue3=UTF-8>

Australian Stock Exchange Corporate Governance Council, ASX CGC. (2003). *Corporate governance principles and recommendations of good corporate governance and best practices recommendations guidelines 1nd Edition*.

Australian Stock Exchange Corporate Governance Council, ASX CGC. (2007). *Corporate governance principles and recommendations of good corporate governance and best practices recommendations guidelines 2nd Edition*.

Ball, R. & Brown, P. (1968). An empirical evaluation of accounting income numbers. *Journal of Accounting Research*, 6, 159-178.

Barth, M., Beaver, W., & Landsman, W. (2001). The relevance of the value relevance literature for financial accounting standard setting: another view. *Journal of Accounting and Economics*, 31, 77-104.

Baxter, P., & Cotter, J. (2009). Audit committee and earnings quality. *Accounting and Finance*, 49, 267-290.

Beasley, M.S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review*, 71(4), 443-465.

Beasley, M.S., Carcello, J.V., Hermanson, D.R., & Lapides P.D. (2000). Fraudulent financial reporting: consideration of industry traits and corporate governance mechanisms. *Accounting Horizons*, 14, 14-21.

Beaver, W.H. (2002). Perspective on recent capital market research. *The Accounting Review*, 77, 453-474.

Becker, C.L., Defond, M.L., Jiambalvo, J., & Subramanyam, K.R. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research*, 15(1), 1-24.

Bedard, J., Chtourou, S.M., & Courteau, L. (2004). The effect of audit committee expertise, independence, and activity on aggressive earnings management. *Auditing: A Journal of Practice & Theory*, 23(2), 13-35.

Benkel,M., Mather, P., & Ramay, A. (2006). The association between corporate governance and earnings management: the role of independent directors, *Corporate Ownership & Control*, 3(4), 65-75.

Berle, A., & Means, G. (1932). *The modern corporation and private property*. McMillan, New York.

Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees (BRC). (1999). *Report and recommendations of the Blue Ribbon Committee on improving the effectiveness of corporate audit committees*. New York Stock Exchange and the National Association of Security Dealers, New York, viewed 16th June 2010.
< http://www.nasdaq.com/about/Blue_Ribbon_Panel.pdf>

Bonazzi, L., & Islam, S.M.N. (2007). Agency theory and corporate governance. A study of the effectiveness of board in their monitoring of the CEO. *Journal of Modelling in Management*, 2(1), 7-23.

Bradbury, M.E., Mak, Y.T., & Tan, S.M. (2006). Board characteristics, audit committee characteristics and abnormal accruals. *Pacific Accounting Review*, 18(2), 47-68.

Braiotta, L. (1999). *The audit committee handbook, third edition*. John Wiley & Sons Inc, New York, United States of America.

Braiotta Jr., L., & Zhou, J. (2008). An exploratory study of the effects of the European Union 8th Directive on Company Law on audit committees: evidence from EU companies listed on the US stock exchanges. *Advances in Accounting, incorporating Advances in International Accounting*, 24, 262-271.

Bronson, S.N., Carcello, J.V., Hollingsworth, C.W., & Neal, T.L. (2009). Are fully independent audit committees really necessary?. *Journal Account Public Policy*, 28, 265-280.

Brown, S., Lo, K., & Lys, T. (1999). Use of r^2 in accounting research: Measuring changes in value relevance over the last four decades. *Journal of Accounting Research*, 28, 83-115.

Bushman, R.M., & Smith, A.J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics*, 32, 237-333.

Cadbury Committee. (1992). *Report of the committee on the financial aspects of corporate governance*. London, viewed 17th June 2010.
< http://www.uksa.org.uk/Corporate_Governance_Cadbury_1992.pdf>

Carcello, J.V., Hermanson, D.R., Neal, T.L., & Riley JR, R.A. (2002). Board characteristics and audit fees. *Contemporary Accounting Research*, 19(3), 365-84.

Carcello, J.V., Hermanson, D.R., & Raghunandan, K. (2005). Factors associated with U.S. public companies' investment in internal auditing. *Accounting Horizons*, 19(2), 69-84.

Carcello, J.V., & Neal, T.L. (2000). Audit committee composition and auditor reporting. *The Accounting Review*, 75(4), 453-467.

Chan, P., Ezzamel, M., & Gwilliam, D. (1993). Determinants of audit fees for quoted UK companies. *Journal of Business, Finance and Accounting*, 20(6), 765-786.

Christopher, J., Sarens, G., & Leung, P. (2009). A critical analysis of the independence of the internal audit function: evidence from Australia. *Accounting, Auditing & Accountability Journal*, 22(2), 220-220.

Chung, R., Firth, M., & Kim, J. (2005). Earnings management surplus free cash flow and external monitoring. *Journal of Business Research*, 58, 766-776

Clarke, T. (2004). *Theories of corporate governance*. Routledge, Great Britain.

Collier, P.A. (1993). Audit committees in major UK companies. *Managerial Auditing Journal*, 8(3), 25-30.

Collier, P., & Gregory, A. (1996). Audit committee effectiveness and the audit fee. *The European Accounting Review*, 5(2), 177-198.

Collins, D., Maydew, E., & Weiss, I. (1997). Changes in the value-relevance of earnings and book values over the past forty years. *Journal of Accounting and Economics*, 24, 39- 79.

Cooley, W.W., & Lohnes, P.R. (1971). *Multivariate data analysis*. J. Wailey and Sons Inc, New York.

Cooper, B.J. (1993). The audit committee and internal audit. *Managerial Auditing Journal*, 8(3), 8-10.

Cooper, B.J., Leung, P., & Mathews, C. (1994). Internal audit: an Australian profile. *Managerial Auditing Journal*, 9(3), 13-19.

Coulton, J., Ruddock, C., & Taylor, S. (2007). Audit fees, non-audit services and auditor-client economic bonding. Working paper, University of New South Wales.

Craswell, A.T., & Francis, J.R. (1999). Pricing intial audit engagements: A test of competing theories. *The Accounting Review*, 74, 201-216.

Dalton, D.R., Dailey, C.M., Ellstrand, A.E., & Johnson, J.L. (1998). Meta-analytic reviews of board composition, leadership structure and financial performance. *Strategic Management Journal*, 19, 269-290.

Dahmash, F., Durand, R., & Watson, J. (2009). The value relevance and reliability of reported goodwill and identifiable intangible assets. *The British Accouting Review*, 41, 120-137.

Davidson, R., Goodwin-Stewart, J., & Kent, P. (2005). Internal governance and earnings management. *Accounting and Finance*, 45, 241- 267.

Davidson, W.N., Xie, B., & Xu, W. (2004). Market reaction to voluntary announcements of audit committee appointments: the effect of financial experts. *Journal of Accounting and Public Policy*, 23, 279-293.

Davis-Friday, P., Eng, L.L., & Liu, C. (2006). The effects of the Asian crisis, corporate governance and accounting system on the valuation of book and earnings. *The International Journal of Accounting*, 41, 22-40.

DeAngelo, L. (1981). Auditor independence, low-balling and disclosures regulation. *Journal of Accounting and Economics*, 3(2), 113-127.

Dellaportas, S., Leung, P., & Cooper, B.J. (2012). Observations on audit committee characteristics. *Managerial Auditing Journal*, 27 (4), viewed 9 July 2013. <http://www.emeraldinsight.com.ezproxy.lib.rmit.edu.au/journals.htm?issn=0268-6902&volume=27&issue=4&articleid=17026574&show=html>

Dey, A. (2008). Corporate governance and agency conflicts. *Journal of Accounting Research,* 46(5), 1143-1181.

DeZoort, F.T. (1997). An investigation of audit committees' oversight responsibilities. *Abacus*, September, 208-227.

DeZoort, F.T., Hermanson, D.R., Archambeault, D.S., & Reed, S. (2002). Audit committee effectiveness: A synthesis of the empirical audit committee literature. *Journal of Accounting Literature*, 21, 38-75.

DeZoort, F.T., & Salterio, S. (2001). The effects of corporate governance experience, financial-reporting and audit knowledge on audit committee members' judgements. *Auditing: A Journal of Practice and Theory*, 20, 31-47.

Dillman, D.A. (2000). *Mail and internet surveys: the tailored design method*. John Wiley & Sons, Inc, New York.

DiMaggio, P.J., & Powell, W.W. (1983). The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 147-160.

Engel, E., Hayes, R.M., & Wang, X. (2010). Audit committee compensation and the demand for monitoring the financial reporting process. *Journal of Accounting and Economics*, 49, 136-154.

Fama, E.F., & Jensen, M.C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-326.

Farrrar, J. (2008). Corporate governance. *Theories, principles and practice, third edition*. Oxford University Press, Victoria, Australia.

Felo, A.J., Krishnamurthy, S., & Solieri, S.A. (2003). Audit committee characteristics and the perceived quality of financial reporting: an empirical analysis. Working paper, Penn State University, Great Valley, PA.

Feltham, G.A., & Ohlson, J.A. (1995). Valuation and clean surplus accountin for operating and financial activities. *Contemporary Accounting Research*, 11(2), 689- 735.

Field, A. (2009). *Discovering statistics using SPSS, third edition*. Sage Publications Ltd, London, United Kingdom.

Firth, M. (1997). The provision of non-audit services by accounting firms to their audit clients. *Contemporary Accounting Research*, 14(2), 1-21.

Francis, J.R. (1984). The effect of audit firm size on audit prices: A study of the Australian market. *Journal of Accounting and Economics*, 6, 133-151.

Francis, J.R. (2004). What do we know about audit quality?. *The British Accounting Review*, 36, 345-368.

Francis, J.R., & Schipper, K. (1999). Have financial statement lost their relevance? *Journal of Accounting Research*, 37, 319-352.

Francis, J.R., & Simon, D.T. (1987). A test of audit pricing in the small-client segment of the U.S. audit market. *The Accounting Review*, 62, 145-157.

Frankel, R.M., Johnson, F.M., & Nelson, K.K. (2002). The relation between auditors' fees for non-audit services and earnings management. *The Accounting Review*, 77, 71-105.

Goddard, A. R., & Masters, C. (2001). Audit committee, Cadbury Code and audit fees: an empirical analysis of UK companies. *Managerial Auditing Journal*, 15(7), 358-371.

Goh, B.W. (2009). Audit committees, board of director and remediation of material weakness in internal control. *Contemporary Accounting Research*, 26(2), 549-579.

Goodwin-Stewart, J. (2003). The relationship between the audit committee and the internal audit function: evidence from Australia and New Zealand. *International Journal of Auditing*, 7, 263-278.

Goodwin-Stewart, J., & Kent, P. (2006). Relation between external audit fees, audit committee characteristics and internal audit. *Journal of Accounting and Finance*, 46(4), 387-404.

Goodwin-Stewart, J., & Kent, P. (2006). The use of internal audit by Australian companies. *Managerial Auditing Journal*, 21(1), 81-101.

Goodwin, J., & Seow, J.L. (2002). The influence of corporate governance mechanisms on the quality of financial reporting and auditing: perceptions of auditors and directors in Singapore. *Accounting and Finance*, 42, 195-223.

Goodwin-Stewart, J., & Yeo, T.Y. (2001). Two factors affecting internal audit independence and objectivity: evidence from Singapore. *International Journal of Auditing*, 5, 107-125.

Garcia-Sanchez, I., Frias-Aceituno, J.V., & Garcia-Rubio, R. (2012). Determining factors of audit committee attributes: evidence from Spain. *International Journal of Auditing*, 16, 184-213.

Grambling, A.A. (2004). Role of the internal audit function in corporate governance: a synthesis of the extent internal auditing literature and directions for future research. *Journal of Accounting Literature*, 23, 194-244.

Gul, F.A., Lynn, S.G., & Tsui, J.S.L. (2002). Audit quality, management ownership and the informativeness of accounting earnings. *Journal of Accounting, Auditing & Finance*, 7(1), 25-49

Gwilliam, D., & Kilcommins, M. (1998). The impact of audit firm size and audit committee on perceptions of audit independence and financial statement reliability in Ireland. *The Irish Accounting Review*, 5(1), 23-56.

Habib, A., & Azim, I. (2008). Corporate governance and the value relevance of accounting information. Evidence from Australia. *Accounting Research Journal*, 21(2), 167- 194.

Hair, J.F., Anderson, R.E., Tatham, R.L., & Black, W.C. (1995). *Multivariate data analysis, fourth edition*. Prentice Hall, Englewood Cliffs, New Jersey, United States of America.

Hansen, S.C. (1997). Designing internal controls: the interaction between efficiency wages and monitoring. *Contemporary Accounting Research*, 14(1), 129-163.

Hoitash, R., & Hoitash, U. (2008). The role of audit committees in managing relationships with external auditors after SOX. *Managerial Auditing Journal*, 24(4), 368-397.

Holland, D. & Ramsay, A. (2003). Do Australian companies manage earnings to meet simple earnings benchmarks? *Accounting & Finance*, 43(1), 41-62.

Institute of Internal Auditors (IIA) (2002a). *The IIA's recommendations to the conference committee on H.R.* Altamonte Springs, FL: The Institute of Internal Auditors.

Institute of Internal Auditors (IIA) (2002b). *Recommendations for improving corporate governance.* Altamonte Springs, FL: The Institute of Internal Auditors.

Institute of Internal Auditors (IIA) (2003a). *The IIA's position statement on audit committees.* Altamonte Springs, FL: The Institute of Internal Auditors.

Institute of Internal Auditors (IIA) (2003b). *The IIA's commentary regarding PCAOB rulemaking docket No.008* . Altamonte Springs, FL: The Institute of Internal Auditors.

Institute of Internal Auditors (IIA) (2010). *Frequently asked questions*. Altamonte Springs, FL: The Institute of Internal Auditors.

Jaggi, B., & Leung, S. (2007). Impact of family dominance on monitoring of earnings management by audit committees: evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, 16, 27-50.

Jamaluddin, A., Mastuki, N., & Ahmad, A. E. (2009). Corporate governance reform and the value relevance of equity book value and earnings in Malaysia. *Journal of Financial Reporting and Accounting*, 7(2), 41-59.

Jensen, M.C., & Meckling, W.H. (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.

Johnson, E.N., Walker, K.B., & Westergaard, E. (1995). Supplier concentration and pricing of audit services in New Zealand. *Auditing: A Journal of Practice and Theory*, 18(6/7), 465-478.

Kalbers, L.P., & Fogarty, T.J. (1993). Audit committee effectiveness: an empirical investigation of the contribution of power. *Auditing: A Journal of Practice and Theory*, 12(1), 24-49.

Kanel, R., Mausbach, B.T., Kudielka, B.M., & Orth-Gomer, K. (2008). Relation of morning serum cortisol to prothrombotic activity in women with stable coronary artery disease. *Journal Thromb Thrombolysis*, 25, 165- 172.

Kaplan, S. (1985). An examination of the effects of environment and explicit internal control on planned audit hours. *Auditing: A Journal of Practice and Theory*, Autumn, 12-25.

King, R., & Langli, J. (1998). Accounting diversity and firm valuation. *The International Journal of Accounting*, 33(5), 529- 567.

Kleiman, R.T. (2010). *Agency theory*. Encyclopaedia of Business Second Edition, viewed 16th June 2010.
< http://www.referenceforbusiness.com/encyclopedia/A-Ar/Agency-Theory.html>

Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, 33, 375-400.

Kraja, A.T., Corbett, J., Ping, A., Lin, R.S., Jacobsen, P.A., Crosswhite, M., Borecki, I.B., & Province, M.A. (2007). Rheumatiod arthritis, item response theory, blom transformation, and mixed models. *BMC Proceedings*, 1(1), 1- 6.

Krishnan, J. (2005). Audit committee quality and internal control: an empirical analysis. *The Accounting Review*, 80(2), 649-675.

Krishnan, G.V., & Visvanathan, G. (2008). Does the SOX definition of an accounting expert matter? The Association between audit committee directors' accounting expertise and accounting conservatism. *Contemporary Accounting Research*, 25(3), 827-857.

Lary, A. M., & Taylor, D.W. (2011). Governance characteristics and role effectivnes of audit committees. *Managerial Auditing Journal*, 27(4), 336-354.

Lev, B., & Zarowin, P. (1999). The boundries of financial reporting an how to extend them. *Journal of Accounting Research*, 37(2), 353-383.

Lifschutz, S., Jacobi, A., & Feldshtein, S. (2010). Corporate governance characteristics and external audit fees: a study of large public companies in Israel. *International Journal of Business and Management*, 5(3), 109-116.

Lin, J.W., Li, J.F., & Yang, J.S. (2006). The effect of audit committee performance on earnings quality. *Managerial Auditing Journal*, 21(9), 921-933.

Low, L., Tan, P.H., & Koh, H.C. (1990). The determinant of audit fees: An analysis in Singapore context. *Journal of Business, Finance and Accounting*, 17(2), 285-295.

Magena, M., & Pike, R. (2004). Shareholding of audit committee members, audit committee size and expertise and the quality of interim financial reporting. Working paper, Bradford University, USA.

Machuga, S., & Teitel, K. (2009). Board of director characteristics and earnings quality surrounding implementation of a corporate governance code in Mexico. *Journal of International Accounting, Auditing and Taxation*, 18(1), 1-13.

McHugh, J., & Raghunandan, K. (1994). Hiring and firing the chief internal auditor. *The Internal Auditor*, 51(4), 34-40.

McHugh, J., & Raghunandan, K. (1994). Internal auditors' independence and interactions with audit committees: Challenges of form and substance. *Advances in Accounting*, 12, 313-333.

Menon, K., & Williams, J.D. (1994). The use of audit committees for monitoring. *Journal of Accounting and Public Policy*, 13(2), 121-139.

Miller, S.E. (2009). Governance mechanisms as moderators of agency costs in a pre-SOX environment. *Journal of Business & Economics Research*, 7(10), 15-32.

Munro, L.A., & Buckby, S. (2008). Audit committee regulation in Australia: how far have we come? *Australian Accounting Review*, 18(44), 310-323.

Mutchler, J., Chang, S., & Prawitt, D. (2001). *Independence and objectivity: a framework for internal auditors*. The Institute of Internal Auditors Research Foundation, Altamonte Springs, Florida.

O'Sullivan, N. (1999). Board characteristics and audit pricing post-cadbury: a research note. *The European Accounting Review*, 8(2), 253-263.

Palmer, R.E. (1997). Audit committees: are they effective? An auditor's view. *Journal of Accountancy*, 114, 76-9.

Palmrose, Z.V. (1986). Audit fees and auditor size. *Journal of Accounting Research*, 24, 97-110.

Pararit, T., & Ussahawanitchakit, P. (2012). Roles of audit committee effectiveness in financial information usefulness of Thai-listed firms. *Journal of International Finance & Economics*, 85-102.

Peasnell, K.V., Pope, P.F., & Young, S. (2005). Board monitoring and earnings management: do outside directors influence abnormal accruals?. *Journal of Business Finance & Accounting*, 32(7&8), 1331-46.

Piot, C., & Janin, R. (2007). External Auditors, audit committees and earnings management in France. *European Accounting Review*, 16(2), 429-454.

Prakash, M., & Venable, C.F. (1993). Auditee incentives for auditor independence: the case of non-audit services. *The Accounting Review*, 68(1), 113-133.

Psaros, J. (2009). *Australia corporate governance. A review and analysis of key issues*. Pearson Education Australia, New South Wales, Australia.

Raghunandan, K., Rama, D.V., & Scarbrough, P. (1998). Accounting and audit knowledge level of Canadian audit committees: some empirical evidence. *Journal of International Accounting, Auditing & Taxation*, 7(2), 181-194.

Raghunandan, K., Read, W.J., & Rama, D.V. (2001). Audit committee composition, "gray directors," and interaction with internal auditing. *Accounting Horizons*, 15(2), 105-118.

Rainsbury, E.A., Bradbury, M., & Cahan, S.F. (2009). The impact of audit committee quality on financial reporting quality and audit fees. *Journal of Contemporary Accounting & Economics*, 5, 20-33.

Reitenga, A.L., & Tearney, M.G. (2003). Mandatory CEO retirements, discretionary accruals, and corporate governance mechanisms. *Journal of Accounting, Auditing & Finance*, 18(2), 255-280.

Rezaee, Z., & Lander, G.H. (1993). The internal auditor's relationship with the audit committee. *Managerial Auditing Journal*, 8(3), 35-40.

Razaee, Z., Olibe, K.O., & Minmier, G. (2003). Improving corporate governance: the role of audit committee disclosure. *Managerial Auditing Journal*, 530-537.

Safieddine, A. (2009). Islamic financial institutions and corporate governance: new insights for agency theory. *Corporate Governance: An International Review*, 17(2), 142-158.

Saleh, N.M., Iskandar, T.M., & Rahmat, M.M. (2007). Audit committee characteristics and earnings management: evidence from Malaysia. *Asian Review of Accounting*, 15(2), 147-163.

Sarens, G., De Beeldle, I., & Everaert. (2009). Internal audit: a comfort provider to the audit committee. *The British Accounting Review*, 41, 90-106.

Scarbrough, P., Rama, D.V., & Raghunandan, K. (1998). Audit committe composition and interaction with internal auditing: Canadian evidence. *Accounting Horizons*, 12(1), 51-62.

Schneider, A., & Wilner, N. (1990). A test of audit deterrent to financial reporting irregularities using the randomised response technique. *The Accounting Review*, 65(3), 668-681.

Simon, D.T. (1995). The audit sevices market: Additional empirical evidence. *Auditing: A Journal of Practice and Theory*, 5(1), 71-78.

Simunic, D.A. (1980). The pricing of audit services: Theory and evidence. *Journal of Accounting Research*, 18, 161-190.

Singh, H., & Newby, R. (2010). Internal audit and audit fees: further evidence. *Managerial Auditing Journal*, 25(4), 309-327.

Stevens, J.P. (2002). *Applied multivariate statistics for social sciences, fourth edition*. Hillsdale, NJ, Erlbum.

Stewart, J., & Subramaniam, N. (2010). Internal audit independence and objectivity: emerging research opportunities. *Managerial Auditing Journal*, 25(4), 328-360.

Taylor, M.H. (1997). The market for audit services in Japan. *Pacific Accounting Review*, 9(2), 59-74.

Van der Zahn, M., & Tower, G. (2004). Audit committee features and earnings management: further evidence from Singapore. *International Journal of Business Governance and Ethics*, 1, 233- 257.

Van Peursem, K.A. (2005). Conversations with internal auditors. *Managerial Auditing Journal*, 20(5), 489-512.

Verschoor, C.C. (1992). Internal auditing interactions with the audit committee. *Internal Auditing*, 7(4), 20-23.

Watts, R.L., & Zimmerman, J. (1986). *Positive Accounting Theory*, Prentice-Hall, Englewood Cliffs.

Xie, B., Davidson III, W.N., & DaDalt, P.J. (2003). Earnings management and corporate governance: the role of the board and the audit committee. *Journal of Corporate Finance*, 9, 295-316.

Yang, J.S., & Krishnan, J. (2005). Audit committees and quarterly earnings management. *International Journal of Auditing*, 9, 201-219.

Yatim, P., Kent, P., & Clarkson, P. (2006). Governance structures, ethnicity, and audit fees of Malaysian listed firms. *Managerial Auditing Journal*. 21(7), 757-782.

Zaman, M., Hudaib, M., & Haniffa, R. (2011). Corporate governance quality, audit fees and non-audit fees. *Journal of Business Finance & Accounting*. 38(1) & (2), 165-197.

Zaman, M., & Sarens, G. (2013). Informal interactions between audit committees and internal audit functions. Exploratory evidence and directions for future research. *Managerial Auditing Journal*. 28(6), 495-515.

Zhang, Y., Zhou, J., & Zhou, N. (2007). Audit committee quality, auditor independence, and internal control weakness. *Journal of Accounting and Public Policy*, 26, 300-327.

APPENDIX

Appendix A: List of Sampled Companies

No	ASX Code	Company Name
1	ABP	Abacus Property Group
2	ACR	Acrux Ltd
3	ADU	Adamus Resources Ltd
4	ABC	Adelaide Brighton Ltd
5	ABY	Aditya Birla Minerals Ltd
6	AGK	AGL Energy Ltd
7	ALS	Alesco Corporation Ltd
8	AWC	Alumina Ltd
9	AMC	Amcor Ltd
10	AMP	AMP Ltd
11	AMX	Ampella Mining Ltd
12	ANN	Ansell Ltd
13	ANZ	ANZ Banking Group Ltd
14	APA	APA Group
15	APN	APN News & Media Ltd
16	AQA	Aquila Resources Ltd
17	ARU	Arafura Resources Ltd
18	AAD	Ardent Leisure Group
19	ALL	Aristocrat Leisure Ltd
20	AIO	Asciano Ltd
21	ASZ	ASG Group Ltd
22	APZ	Aspen Group
23	AZT	Aston Resources Ltd
24	AJA	Astro Japan Property Group
25	ASX	ASX Ltd
26	AGO	Atlas Iron Ltd
27	AUT	Aurora Oil & Gas Ltd
28	ASL	Ausdrill Ltd
29	AAX	Ausenco Ltd
30	AAC	Australian Agricultural Company Ltd
31	API	Australian Pharmaceutical Industries Ltd
32	ASB	Austal Ltd
33	AUN	Austar United Communications Ltd
34	ANG	Austin Engineering Ltd
35	ALZ	Australand Property Group
36	AWE	AWE Ltd
37	BND	Bandanna Energy Ltd
38	BOQ	Bank of Queensland Ltd
39	BPT	Beach Energy Ltd
40	BDR	Beadell Resources Ltd
41	BEN	Bendigo & Adelaide Bank Ltd

No	ASX Code	Company Name
42	BHP	BHP Billiton Ltd
43	BBG	Billabong International Ltd
44	BTA	Biota Holdings Ltd
45	BSL	BlueScope Steel Ltd
46	BLY	Boart Longyear Ltd
47	BLD	Boral Ltd
48	BOW	Bow Energy Ltd
49	BKN	Bradken Ltd
50	BXB	Brambles Ltd
51	BRM	Brockman Resources Ltd
52	CAB	Cabcharge Australia Ltd
53	CTX	Caltex Australia Ltd
54	CPB	Campbell Brothers Ltd
55	CFE	Cape Lambert Resources Ltd
56	CNX	Carbon Energy Ltd
57	CVN	Carnarvon Petroleum Ltd
58	CRZ	Carsales.com Ltd
59	CCV	Cash Converters International Ltd
60	CAH	Catalpa Resources Ltd
61	CNP	Centro Properties Group
62	CER	Centro Retail Group
63	CFU	Ceramic Fuel Cells Ltd
64	CDI	Challenger Diversified Property Group
65	CIF	Challenger Infrastructure Fund
66	CGF	Challenger Ltd
67	CHC	Charter Hall Group
68	CQO	Charter Hall Office REIT
69	CQR	Charter Hall Retail REIT
70	CLO	Clough Ltd
71	CCL	Coca-Cola Amatil Ltd
72	COH	Cochlear Ltd
73	COK	Cockatoo Coal Ltd
74	CBA	Commonwealth Bank of Australia
75	CPU	Computershare Ltd
76	CEU	ConnectEast Group
77	CQT	Conquest Mining Ltd
78	CWN	Crown Ltd
79	CSV	CSG Ltd
80	CSL	CSL Ltd
81	CSR	CSR Ltd
82	CUS	Customers Ltd
83	DTE	Dart Energy Ltd
84	DJS	David Jones Ltd
85	DXS	DEXUS Property Group

No	ASX Code	Company Name
86	DML	Discovery Metals Ltd
87	DOW	Downer EDI Ltd
88	DUE	DUET Group
89	DLX	DuluxGroup Ltd
90	ESG	Eastern Star Gas Ltd
91	ELD	Elders Ltd
92	EHL	Emeco Holdings Ltd
93	ERA	Energy Resources of Australia Ltd
94	EWC	Energy World Corporation Ltd
95	ENV	Envestra Ltd
96	EXT	Extract Resources Ltd
97	FXJ	Fairfax Media Ltd
98	FKP	FKP Property Group
99	FWD	Fleetwood Corporation Ltd
100	FXL	FlexiGroup Ltd
101	FLT	Flight Centre Ltd
102	FMS	Flinders Mines Ltd
103	FGE	Forge Group Ltd
104	FMG	Fortescue Metals Group Ltd
105	FGL	Fosters Group Ltd
106	GXY	Galaxy Resources Ltd
107	GBG	Gindalbie Metals Ltd
108	GCL	Gloucester Coal Ltd
109	GFF	Goodman Fielder Ltd
110	GMG	Goodman Group
111	GPT	GPT Group
112	GNC	GrainCorp Ltd
113	GRR	Grange Resources Ltd
114	GRY	Gryphon Minerals Ltd
115	GUD	GUD Holdings Ltd
116	GWA	GWA Group Ltd
117	HVN	Harvey Norman Holdings Ltd
118	HIL	Hills Holdings Ltd
119	HZN	Horizon Oil Ltd
120	IIN	iiNet Ltd
121	ILU	Iluka Resources Ltd
122	IMD	Imdex Ltd
123	IMF	IMF (Australia) Ltd
124	IPL	Incitec Pivot Ltd
125	IRN	Indophil Resources NL
126	IDL	Industrea Ltd
127	IFN	Infigen Energy stp
128	IOF	Investa Office Fund
129	IAG	Insurance Australia Group Ltd

No	ASX Code	Company Name
130	IAU	Intrepid Mines Ltd
131	IVC	InvoCare Ltd
132	IFL	IOOF Holdings Ltd
133	IRE	IRESS Market Technology Ltd
134	IVA	Ivanhoe Aust
135	JBH	JB Hi-Fi
136	KZL	Kagara Ltd
137	KAR	Karoon Gas Australia Ltd
138	KCN	Kingsgate Consolidated Ltd
139	LEI	Leighton Holdings Ltd
140	LLC	Lend Lease Group
141	LNC	Linc Energy
142	LYC	Lynas Corporation Ltd
143	MCC	Macarthur Coal Ltd
144	MAH	Macmahon Holdings Ltd
145	MQA	Macquarie Atlas Roads Group
146	MQG	Macquarie Group Ltd
147	MAP	MAp Group
148	MCE	Matrix Composites & Engineering Ltd
149	MMS	McMillan Shakespeare Ltd
150	MCP	McPhersons Ltd
151	MML	Medusa Mining Ltd
152	MEO	MEO Australia Ltd
153	MRM	Mermaid Marine Australia Ltd
154	MSB	Mesoblast Ltd
155	MTS	Metcash Ltd
156	MNC	Metminco Ltd
157	MIO	Miclyn Express Offshore Ltd
158	MRE	Minara Resources Ltd
159	MCR	Mincor Resources NL
160	MDL	Mineral Deposits Ltd
161	MIN	Mineral Resources Ltd
162	MBN	Mirabela Nickel Ltd
163	MGR	Mirvac Group
164	MPO	Molopo Energy Ltd
165	MND	Monadelphous Group Ltd
166	MGX	Mount Gibson Iron Ltd
167	MMX	Murchison Metals Ltd
168	MYR	Myer Holdings Ltd
169	NAB	National Australia Bank Ltd
170	NVT	Navitas Ltd
171	NCM	Newcrest Mining Ltd
172	NXS	Nexus Energy Ltd
173	NDO	Nido Petroleum Ltd

No	ASX Code	Company Name
174	NFE	Northern Iron Ltd
175	NUF	Nufarm Ltd
176	OKN	Oakton Ltd
177	OST	OneSteel Ltd
178	ORI	Orica Ltd
179	ORG	Origin Energy
180	OZL	OZ Minerals Ltd
181	PBG	Pacific Brands Ltd
182	PDN	Paladin Energy Ltd
183	PNA	PanAust Ltd
184	PAN	Panoramic Resources Ltd
185	PPX	PaperlinX Ltd
186	PPT	Perpetual Ltd
187	PRU	Perseus Mining Ltd
188	PXS	Pharmaxis Ltd
189	PLA	Platinum Australia Ltd
190	PMV	Premier Investments Ltd
191	PRY	Primary Health Care Ltd
192	PRG	Programmed Maintenance Services Ltd
193	QAN	Qantas Airways Ltd
194	QBE	QBE Insurance Group Ltd
195	RMS	Ramelius Resources Ltd
196	RHC	Ramsay Health Care Ltd
197	REA	REA Group Ltd
198	RRL	Regis Resources Ltd
199	RXM	Rex Minerals Ltd
200	RHG	RHG Ltd
201	RIO	Rio Tinto Ltd
202	RIV	Riversdale Mining Ltd
203	ROC	Roc Oil Company Ltd
204	SAI	SAI Global Ltd
205	SFR	Sandfire Resources NL
206	STO	Santos Ltd
207	SAR	Saracen Mineral Holdings Ltd
208	SDM	Sedgman Ltd
209	SEK	SEEK Ltd
210	SVW	Seven Group Holdings Ltd
211	SIP	Sigma Pharmaceuticals Ltd
212	SLR	Silver Lake Resources Ltd
213	SGM	SIMS Metal Management Ltd
214	SKE	Skilled Group Ltd
215	SMX	SMS Management & Technology Ltd
216	SHL	Sonic Healthcare Ltd
217	SPN	SP AusNet

No	ASX Code	Company Name
218	SKI	Spark Infrastructure Group
219	SFH	Specialty Fashion Group Ltd
220	SPT	Spotless Group Ltd
221	SBM	St Barbara Ltd
222	SXL	Southern Cross Media Group Ltd
223	SGP	Stockland
224	SRQ	Straits Resources Ltd
225	SGN	STW Communications Group Ltd
226	SUN	Suncorp Group Ltd
227	SDL	Sundance Resources Ltd
228	SUL	Super Retail Group Ltd
229	TAH	Tabcorp Holdings Ltd
230	TAP	Tap Oil Ltd
231	TGR	Tassal Group Ltd
232	TTS	Tatts Group Ltd
233	TLS	Telstra Corporation Ltd
234	TEN	Ten Network Holdings Ltd
235	TRS	The Reject Shop Ltd
236	TOL	Toll Holdings Ltd
237	TOX	Tox Free Solutions Ltd
238	TPM	TPG Telecom Ltd
239	TSE	Transfield Services Ltd
240	TPI	Transpacific Industries Group Ltd
241	TCL	Transurban Group
242	TRY	Troy Resources NL
243	UGL	UGL Ltd
244	VBA	Virgin Blue Holdings Ltd
245	WTP	Watpac Ltd
246	WES	Wesfarmers Ltd
247	WSA	Western Areas NL
248	WDC	Westfield Group
249	WBC	Westpac Banking Corporation
250	WEC	White Energy Company Ltd
251	WHC	Whitehaven Coal
252	WPL	Woodside Petroleum
253	WOW	Woolworths Ltd
254	WOR	WorleyParsons Ltd
255	WTF	Wotif.com Holdings Ltd

Appendix B: Ethics Approval Letter

Ref: Ethics Appl. 1000286

Wednesday, June 21 2011

Shirli Ng
1412 / 570 Lygon St
Carlton
Vic 3053

Dear Shirli

I am pleased to advise that your application for ethics approval for a Research Project has been approved by the Chair of the Business College Human Ethics Advisory Network. Approval has been granted for the period from 21 June 2011 to 1 March 2014.

The RMIT Human Research Ethics Committee (HREC) requires the submission of Annual and Final reports. These reports should be forwarded to the Business College Human Ethics Advisory Network Secretary. Annual Reports are due in December for applications submitted prior to September the year concerned. I have enclosed a copy of the Annual/ Final report form for your convenience. Please note that this form also incorporates a request for extension of approval, if required.

Best wishes for your research.

Yours sincerely

Kristina Tsoulis-Reay
Secretary
Business College Human Ethics Advisory Network

Encl.

BCHEAN Register Number: 1000286
Date Received: 17-May-2011

RMIT BUSINESS
COLLEGE HUMAN ETHICS ADVISORY NETWORK (BCHEAN)

Application for Approval of Research Project

SUMMARY & APPROVAL

Project Title: *The Relationship between the Audit Committee and the Internal Audit Function: The Role of Audit Committee and the Independence of the Internal Audit Function*

Principal Investigator: Shirli Ng

Supervisor: Dennis Taylor

Project Category: Low Risk

School Name: Accounting

Degree for which research is undertaken (if applicable): PhD

Contact Telephone Number: 0423 315 626

Email Address: shirli.ng@rmit.edu.au

BUSINESS COLLEGE HUMAN ETHICS ADVISORY NETWORK USE ONLY:

Date Application Received: 17 May 2011

Business College Human Ethics Advisory Network Register No: 1000286

Period of Approval: 21 June 2011 to 1 March 2014

Comments / Provisos: N/A

The Business College Human Ethics Advisory Network assessed the Project as Low Risk

Signature: _____ **Date:** 21 June 2011
Professor Roslyn Russell, BCHEAN Chair

Appendix C: Questionnaire Cover Letter

30 November 2011

Melbourne VIC 3000
Australia

Tel. +61 3 9925 5700
Fax +61 3 9925 5741
www.rmit.edu.au

«First_Name» «Last_Name»
«Position»
«Company_Name»
«Address_1»
«Address_2»
«Suburb», «State» «Postcode»

Dear «Title». «Last_Name»,

A Survey on Working Relationships between Internal Auditors and Audit Committees

Your participation is sought in a project conducted by RMIT University's School of Accounting, with the support of the Institute of Internal Auditors (IIA) Australia. The project, conducted on the top 300 ASX listed companies, requires the knowledge and perceptions of the company's senior internal auditor. It is an investigation of practice relationships between company internal auditors and audit committees.

Our findings will be published through the IIA and in academic circles, with your anonymity being assured in these publications. We can send you a confidential preliminary report on the findings that will enable your organisation to compare itself to other top 300 listed companies on how roles are fulfilled and processes carried out between the audit committee and internal audit function.

To participate, please arrange for completion of the enclosed questionnaire by your organisation's senior internal auditor. To this end, we ask that you please pass this questionnaire to the company's *Chief Audit Executive*. If your company's internal audit function is outsourced, could you please simply complete the attached slip to allow us to follow up with your company's internal audit service provider.

The questionnaire, which is enclosed with a reply-paid envelope, should take approximately 8-10 minutes to complete. Alternatively, you can choose to complete and submit the same questionnaire online by going to the website at: *https://www.surveymonkey.com/s/RMIT_IIASurveyInhouse*. If possible, please complete this task by Monday, 19th December, 2011.

Your support in this survey is greatly appreciated and valued. Responses will be treated in strictest confidence. This research project has been vetted and approved by RMIT University's Business College Human Ethics Committee. Should you have queries, the research project leader, Professor Dennis Taylor, can be contacted by email at dennis.taylor@rmit.edu.au or by phone at 03 9925 5765.

Thank you for your participation.

Yours sincerely,

Professor Dennis Taylor
Professor in Accounting

Shirli Ng
Researcher Assistant & PhD student

Enclosure: Questionnaire, Reply-paid Envelope & Outsourced Slip

Appendix D: Questionnaire

The Internal Audit Function and the Audit Committee

General Instructions

Dear Sir or Madam,

This questionnaire is organised in five sections. It should take you approximately 8 to 10 minutes to complete. Your insight is vital to this research. Please be assured that all responses will be kept strictly confidential. Thank you.

Option 1:

Complete the questionnaire below and send it back to us in the enclosed postage-paid envelope.

OR

Option 2:

Complete and submit the questionnaire online. To open and start this survey, please go to this website: https://www.surveymonkey.com/s/RMIT_IIASurveyInhouse

Section 1: Background

1. Your age group: (Please tick)
   - ☐ BELOW 35
   - ☐ 35 TO 44
   - ☐ 45 TO 54
   - ☐ 55 TO 64
   - ☐ 65 OR OLDER

2. Gender:
   - ☐ MALE ☐ FEMALE

3. How long have you worked in the internal audit field over your career?
   _____ Years

4. What is your current job position?
   _____

5. What is the name of your company? (Optional)
   _____
   (Note: We seek your company name only for purposes of linking data from your responses with that company's publicly available published governance data. Please be assured that you and your company will remain anonymous and not be mentioned by name in any future published research.)

6. Size of your company based on market capitalization:
   - ☐ ASX TOP 20
   - ☐ ASX 21- 100
   - ☐ ASX 101- 300
   - ☐ ASX 301- 500
   - ☐ ASX BELOW 500

7. Industry of your company:
   - ☐ CONSUMER DISCRETIONARY
   - ☐ CONSUMER STAPLES
   - ☐ ENERGY
   - ☐ FINANCIALS
   - ☐ HEALTH CARE
   - ☐ INDUSTRIALS
   - ☐ INFORMATION TECHNOLOGY
   - ☐ MATERIALS
   - ☐ TELECOMMUNICATION SERVICES
   - ☐ UTILITIES
   - ☐ OTHERS

8. How many professional internal audit staff is employed in your company?
   _____

9. What is the total annual internal audit budget? (Approximately dollar)
   - ☐ $20,000 AND BELOW
   - ☐ $21,000 TO $50,000
   - ☐ $51,000 TO $100,000
   - ☐ $101,000 TO $200,000
   - ☐ $201,000 TO $500,000
   - ☐ $501,000 TO $1,000,000
   - ☐ $1,001,000 AND ABOVE

Section 2: Internal Audit Function Activities

10. How many <u>total hours</u> per employee (approximately) were devoted to internal audit services during your company's most recent financial year?
    _____

11. For the total hours indicated in Question 10, what <u>proportion</u> was allocated to each of the following activities? (Please note that the percentage of hours should add up to 100%):

Activity Description	**% of Hours**
Deterring and investigating fraud	
Maintaining the efficacy of management control systems	
Financial statement auditing in collaboration with the external auditors	
Evaluating the effectiveness of risk management, including safe guarding assets	
Engaging in board and other corporate governance support work	
Other activities (please specify:_____)	

12. To what extent, does your internal audit function: (Please tick)

	Never	Seldom	Sometimes	Often	Almost Always
Provide a training ground as part of employees' career paths in the company	☐	☐	☐	☐	☐
Have turnover of staff moving to other areas of the company	☐	☐	☐	☐	☐

13. Please indicate your level of agreement with the following statements:
(Please tick and answer in all three columns)

Statement	Audit Committee	Chief Executive Officer	Chief Financial Officer
Your internal audit function regularly reports to:	☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree	☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree	☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree
In setting the internal audit's annual budget, there is substantial involvement by:	☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree	☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree	☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree
In any decisions to appoint or replace the Chief/ Director of Internal Audit, substantial influence would be expected to come from:	☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree	☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree	☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

14. To what extent, does your internal audit function coordinate with the external auditors in respect of:

	Never	Seldom	Sometimes	Often	Almost Always
Areas of internal audit coverage, other than financial statements	☐	☐	☐	☐	☐
Internal audit work schedule	☐	☐	☐	☐	☐

15. To what extent, does the external auditors have access to:

	Never	Seldom	Sometimes	Often	Almost Always
Working papers of your internal audit function	☐	☐	☐	☐	☐
Most management reports of your internal audit function	☐	☐	☐	☐	☐

Section 3: Audit Committee and the Internal Audit Function

16. How many times a year does you/ your internal audit function meet with the Audit Committee and how long is the length of the meeting?

Number of meetings a year : _____
Length of the meetings
(On average, minutes) : _____

17. In terms of privacy of your meetings with the Audit Committee (chair, individual members or committee):
    - ☐ All meetings are totally private
    - ☐ All meetings are partially private
    - ☐ Some meetings in a year have private time
    - ☐ No private meetings

18. How do you rate the overall expertise of the Audit Committee members in regards to accounting, auditing and internal control matters? (Please tick one)
    - ☐ Excellent
    - ☐ Good
    - ☐ Moderate
    - ☐ Poor

19. How often does the Audit Committee review or assess the plans of the internal audit function in terms of its:

	Never	**Seldom**	**Sometimes**	**Often**	**Almost Always**
Scheduling of work projects	☐	☐	☐	☐	☐
Co-ordinating with the external auditors	☐	☐	☐	☐	☐

20. How often per year does the Audit Committee receive reports from your internal audit function related to:

	None per year	**1- 2 per year**	**3- 5 per year**	**6 or more per year**
Routine internal audit activities	☐	☐	☐	☐
Special investigations	☐	☐	☐	☐

Section 4: Internal Audit Function Independence

21. Please indicate your level of agreement with the following statements:

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Your internal audit function puts a great deal of effort beyond that normally expected in order to ensure dedication to independence	☐	☐	☐	☐	☐
Your internal audit function would resist almost any type of pressure and threat in order to maintain independence	☐	☐	☐	☐	☐
When your internal audit function is required to work under both an 'audit' role and 'advisory service' role by the management this will never compromise independence in the audit role	☐	☐	☐	☐	☐
The existing relationship between the Audit Committee (or its chair) and the internal auditor provides a strong backing for the maintenance of your internal audit function's independence	☐	☐	☐	☐	☐
The independence of your internal audit function is strongly upheld because of Audit Committee members have strong collective independence	☐	☐	☐	☐	☐
The Audit Committee would be prepared to take action to maintain the independence of your internal audit function if it is threatened by management	☐	☐	☐	☐	☐

22. Do you have any comments about your internal audit function, the Audit Committee or the external auditors in your organisation?

_____
_____
_____
_____

Thank you for your participation. Your assistance is greatly appreciated.

Please <u>return</u> the questionnaire using the enclosed postage-paid envelope.
Confidentiality will be strictly assured.

SUMMARY REPORT: If you wish to receive a summary of the research findings, kindly provide your details below or attach your business card:

Name: _____

Email: _____